



The American **CINEMATOGRAPHER**

A·MAGAZINE·FOR
PROFESSIONALS
AND·AMATEURS

In this number

MAKE-UP FOR FAST FILM
16 MILLIMETER IN THE AIR
MAKING MINIATURES


PRICE 25^c

NOVEMBER 1931

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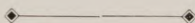
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Riders of Purple Sage

Fox production and release. Features George O'Brien, Marguerite Churchill and Noah Beery underlined. Based on Zane Grey's novel of same name. Directed by Hamilton MacFadden. Photography, Geo. Schneiderman; sound, Eugene Grossman. At the Roxy, N. Y., week Sept. 25. Running time, 58 min.

| | |
|------------------|----------------------|
| Lassiter | George O'Brien |
| Jane Withersteen | Marguerite Churchill |
| Judge Dyer | Noah Beery |
| Bess | Yvonne Pelletier |
| Venters | James Todd |
| Oldring | Stanley Fields |
| Fay | Shirley Nail |

This Zane Grey milestone is still a good western. Hardly for the deluxe houses, but the Roxy is dressing it up by giving it a wide screen all the way. For the B and C houses and all spots behind those classes this veteran of screen stories will make good.

As far as Fox is concerned George O'Brien is Jim Lassiter, III, even though it's the first time the character has had his voice amplified for an audience. Back in '18 this company adapted the Grey tale and spotted William Farnum in it. Seven years later Fox tried it again with Tom Mix. Approximately another seven years and now O'Brien for the story's debut in sound. Those seven-year lapses represent cycles in Hollywood, the studios generally figuring it suicide to remake a picture in any time less than that. Anyway, this certainly makes Lassiter the Peter Pan of the horse operas.

Here the story gets dialog for the first time and that seems one of its troubles. Every so often the conversation becomes a little tiring and still a little Arizona in the middle of the nineteenth century. But George Schneiderman's lens ability plus a tot named Shirley Nails go a long way to overcome the inept talk. The photography, incidentally, is probably the main reason the Roxy decided upon the big screen. Any number of times during the screening it's obvious that Schneiderman's glass and the wide angle projection lens are tossing bouquets at each other as there are many instances in which one enhances the other.

If the story needs recounting and it probably doesn't, the principal conjecture is that it was a happy day for fisherman Grey when he penned

'Riders.' It marked the first time he hit the best seller class and Fox has presumably determined to keep it alive forever.

O'Brien interprets Lassiter as of the familiar strong and silent type. It's a likeable performance by the featured player whose dexterity with a gun is noteworthy here. Marguerite Churchill is often in the embarrassing predicament of long and theatric speeches which won't help her impression in the better houses if Fox intends to send it through these spots embellished by enlarged projection. Noah Beery is in and out briefly as the much discussed but little seen menace.

McFadden's direction has apparently closely followed the trail of his predecessors. No unusual high glow lights although the dramatic breaking up of a stampede by Lassiter has been muffed for audience effect although a climaxing avalanche has been well cameraed. For those who have forgotten the tale, perhaps a reminder that this avalanche saves Lassiter and the girl to eventually spend the rest of their lives in Surprise Valley will recall the yarn which ends when Lassiter pushes over the balancing rock to choke off the pursuers and at the same time close their own one means of escape. Director's best contribution to all this is a workmanlike simulation of a secret mountain passage having its entrance masked by a waterfall.

The Roxy matinee audience took it all good humoredly and found only one spot to snicker over, the situation where the girl gives Lassiter back his gun after berating his killer instinct. Picture doesn't look expensive and for that reason, in addition to its scenic beauty and action, it should finally come up as a refutation of the 'they can't come back' theory. It is entirely devoid of comedy other than for the antics of the diminutive Miss Niles.

Fox ads for the Roxy showing ran in the dailies without mentioning a cast name, and on the introductory screen wording the author is above the film's title. Lack of drawing power among the players is a handicap for the picture which won't figure so much for the subsequent runs.

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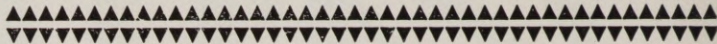
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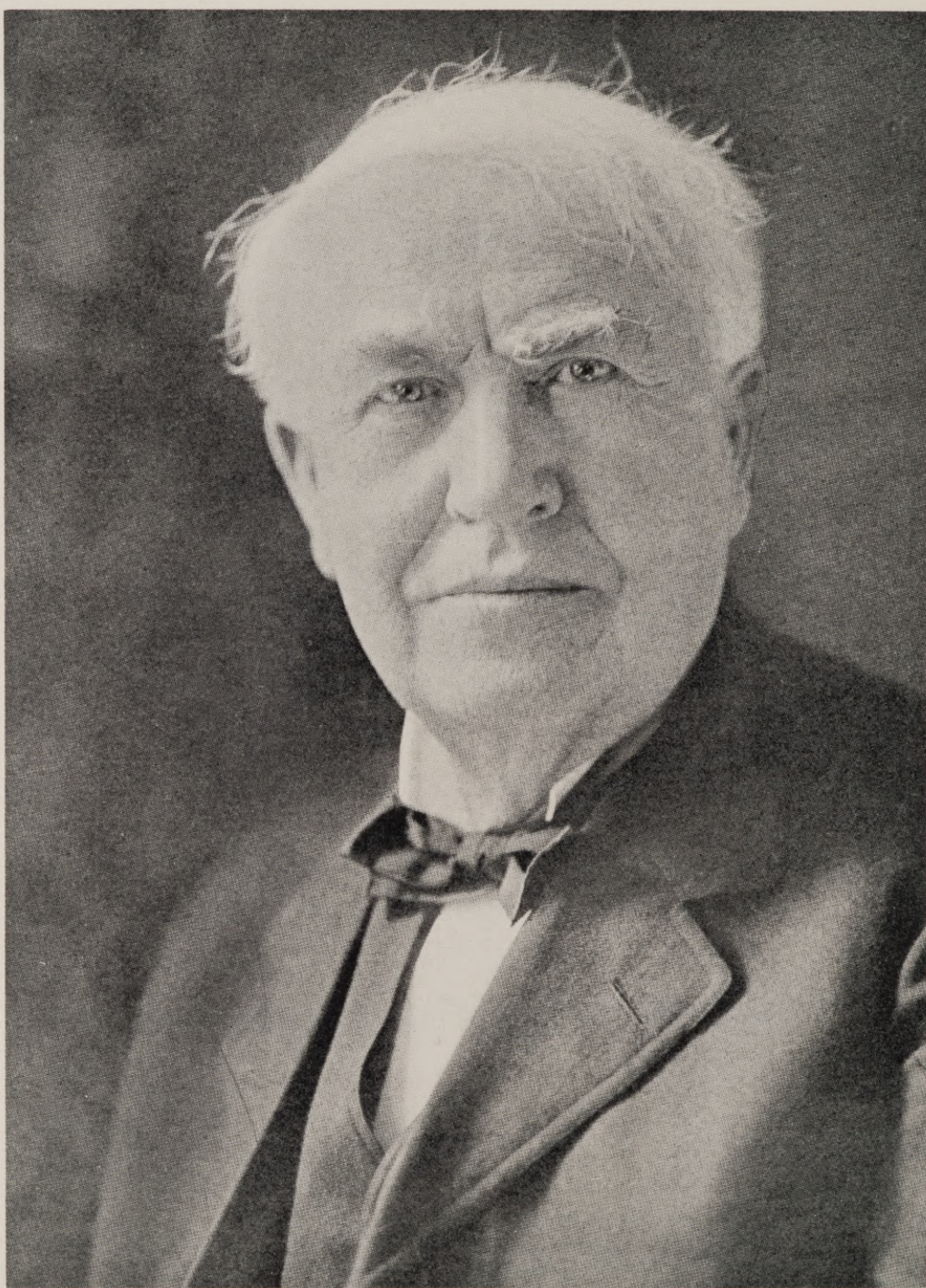
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THOMAS A. EDISON is gone. And with his passing the American Society of Cinematographers loses one of its most loved and honored members—a loss which never can be replaced. Mr. Edison was the first Honorary member elected to this society, and his keen interest in its affairs was ever an inspiration to its members. To extol Edison is a task far beyond mere man, for words are futile in such an undertaking. Twilight from now to eternity will do more to pay him homage than all the words of our vocabulary, for as daylight fades, millions of his lamps take up the vigil, forming the western boundary of a zone of man-made light, following in the wake of the sun as it encircles the globe and spreading half way 'round the world to meet its return in the east.

Making Miniatures

by **DON JAHRAUS**

Head of Miniature Department, RKO Studios.

MINIATURES have a twofold purpose in motion picture production. They are used primarily to accomplish certain action which would be impossible or impractical in actuality. They are also used to establish backgrounds, and to provide settings which would otherwise be too elaborate for normal reproduction. In neither case are they intended, as some laymen mistakenly claim, to fool or defraud the public. On the contrary, they are intended to benefit the public by giving them better, more convincing pictures at lower cost in money and frequently in human life. Miniatures, in fact, are quite as legitimate a part of production as are full-scale sets.

The making of these miniature sets has become a highly specialized art. It is usually carried on by a separate and entirely self-contained department, the head of which works in extremely close contact with the supervising art-director of the studio and with the special photography or trick-camera department whose personnel do the work of photographing the completed miniature sets. Miniature making demands a unique combination of technical and artistic attainments. Success depends upon a happy combination of photographic, artistic, and mechanical effects, and since all of these factors enter into the design of every miniature, the miniature technician must have an intensive

first-hand understanding of all three. He must be sufficiently an artist to make his miniatures harmonize with the full-scale settings of the picture, sufficiently a photographer to be able to design his miniatures for the camera, and sufficiently an engineer to be able to design efficient, workable miniature properties.

Each individual miniature setting is a separate problem.

There can be no blanket rules laid down for their construction. Even the size and scale must vary: one cannot merely say, "all miniatures should be made to such and such a scale". Instead, size and scale must be determined individually, to give the exact effect desired together with the most workable size. Cost is by no means relative to size; in fact, larger sizes will prove more economical as a rule, since they are more efficiently constructed. Incidentally, they give the cameraman more latitude in photography, which is a very important factor. The designer must, in determining the scale and size used, consider the optical possibilities of the equipment used, particularly lens-angles and depth of focus, which latter becomes

especially important in such short-range work.

In the execution of the design, exactness of detail is of vital importance, especially in the foreground, or in prominent elements of the setting elsewhere. This unusual detail is re-



An excellent example of a modern miniature—hills, streams, train—believe it or not.



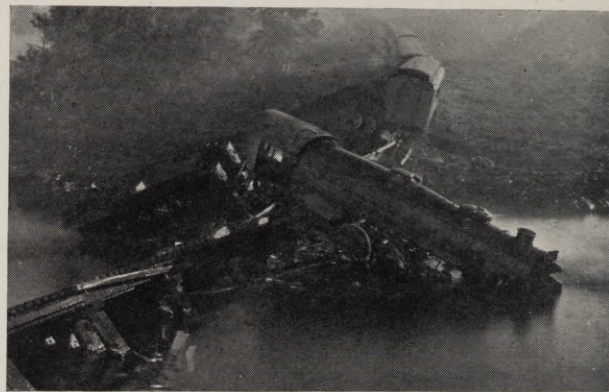
Another example of what is done in the Miniature Department.

quired in order to avoid grossness, which destroys the illusion of reality that is the distinctive difference between a good miniature prop and commonplace models and toys. Although this minute detail is rarely so apparent in the completed shot as to be consciously noticeable to the audience, it is none the less important, for if it is missing the audience speedily becomes conscious of it, and resentful of the fact that it is looking at a miniature. For this reason, the ordinary models available throughout the country from model shops or individual, amateur model-makers, are seldom, if ever, of any value for use in miniature sets, while, of course, toy automobiles, airplanes, railroad trains, etc., are naturally worse than useless. Furthermore, such miniature properties must be conceived and executed in a definite relationship with the miniature set upon which they are to be used. Unless both the miniature prop and its accompanying set are perfectly coordinated, the illusion of reality is lost, and the shot will be worthless.

The importance of proper painting cannot be over-emphasized. Scale and distance—the illusion of actuality, in fact—depend largely upon this operation. Contrast must be eliminated in the foreground and accentuated in the background to aid in conveying the impression of natural atmospheric distances. The cinematographer, too, by the discerning use of such devices as gauzes, glasses, and lighting effects plays a large part in creating this illusion. The use of natural backgrounds and filtered skies add immeasurably to the scenic values of the shot, as well.

The miniature technician must be familiar with the use of an endless variety of materials and trades. Among these are carpentry, pattern-making, carving, sheet-metal work, casting in both metal and plaster, plastering, machine-work, electrical design and construction, mechanical engineering, and painting. He must be a particular type of landscape-gardener, with an intensive knowledge of the various shrubs and plants adaptable to his peculiar needs. He must know something of practical geology. He must be enough of a modeller to reproduce in form and texture the various natural formations. He must be enough of an artist and photographer to see that his work is not only properly painted, but painted so as to secure the desired photographic effects. He must be ingenious enough to devise mechanical methods of obtaining the action required—no matter what that may be. He must, in a word, be able not only to make models that look right, but models that will work. This is a broad field indeed, and experience is the only teacher. Furthermore, experience can teach only the basic processes, for each new miniature is a separate problem, requiring individual and distinctive treatment, differing in detail from all other miniatures.

The miniature technician cannot, however, bring his shot to the screen single-handed. His efforts must be united with those of the cinematographer in order to add the set and its action to the picture. Like the miniature-maker, the camera-



A modern miniature train wreck

man must be a specialist, for he, too, is dealing with a highly individualized problem, in which experience is his most valuable asset. Only experience can teach him the type of treatment and equipment required. Therefore, while there are many expert cinematographers who are capable of photographing full-scale action on normal sets, there are only a few really competent miniature-cinematographers. There is a very definite, though elusive, relation between the size and scale of the miniature and the photographic treatment it requires. Lighting a miniature set is entirely different from lighting a normal, full-size one. The scale of the miniature and the speed of the camera must correspond exactly, while different types of action require different taking-speeds. As a rule, the best results are obtained by the use of super-normal speeds—running in general practice from four to eight times normal. Most important of all is the placement of the camera, for upon this depends much of the success of the shot. Not only is the horizontal angle important, but the height of the camera, as well. This last factor is greatly influenced again by the size and scale of the miniature, as well as by the nature of the action. Frequently a great deal of special treatment is necessary—particularly in the foreground in order to avoid undue softness of focus without sacrifice of the natural detail of the scene, upon which the illusion of actuality depends. A peculiar feature of miniature photography is that, despite this need of detail, the scene must nevertheless be both lighted and photographed softly. The inexperienced cinematographer will almost inevitably photograph his scenes too crisply, which will destroy completely the desired illusion of naturalness, and reveal the scene as patently a miniature. The photographer must, also, be an expert in super-speed cinematography, for the softness increases directly as the speed increases—and he must know how to use this

(Continued on Page 42)



Photographing a miniature wreck



An early miniature, with all the earmarks of inexperience

Make-up for Fast Film

by **JAMES BARKER**

Head of Makeup Department, Fox Studios.

IT WAS inevitable that the introduction of the new "Fast Film" should be of almost as much importance to the makeup artist as it was to the cinematographer, for his work is of an almost photographic nature. It demands nearly as much knowledge of photographic technique as does actual camera-work. For the successful makeup artist must know not only the application of grease-paints, liners, rouges, and powders, and their photographic values, but the exact technique of each individual cameraman with whom he works. No branch of moving picture production can be self-sufficient: each must cooperate closely with every other branch, and particularly with the photographic branch, since after all the only reason for anything that goes into a picture is to be photographed.

And if this close cooperation with the cameraman is important to the success of the other production departments, it is absolutely vital to the success of the makeup department. Faulty makeup work will spoil the best photography—and lack of understanding of the methods of the individual cameraman will often turn an otherwise perfect makeup into a bad one. The reason for this is that the success of a makeup depends upon its being accurately suited to the photographic conditions applying on the set. In other words, the makeup must not only suit the subject, but the film used in photographing that subject, the filters used (if any), and most of all the type of lighting used by the cameraman in charge of the picture. We have found through sad experience that we cannot give each player a standard makeup treatment to be used unchangingly: if, for instance John Seitz is photographing a star—say Janet Gaynor—she must wear one type of makeup, while if James Howe, or Arthur Edeson, for instance, were to be assigned to photograph her next picture, she would in each case wear a considerably different makeup. Obviously, the cameraman and makeup man must work together as closely and understandingly as brothers.

For this reason, in my department we have a firmly established practice of having a makeup expert on the set at all times. It is his duty to see that all the players—from the stars to the "bit" people—are always made up properly for the requirements of the particular cinematographer who is in charge. This policy has proven extremely popular with the cameramen, for it frees them of the responsibility of supervising this important but often infinitely troublesome detail, and allows them additional time to concentrate on their primary business of securing the best possible photographic effects. Most first cinematographers can remember the days when, as there were no studio makeup departments, they had to personally check every makeup in the cast, and often fight unceasingly to prevent certain players from experimenting during a picture, and starting the picture with one face and ending it with another. But not only has this policy proven a time and labor saver to the cinematographer, director, and supervisor, but it has also given the makeup department a far better chance to keep in close touch with the preferences and methods of each individual cameraman—and accordingly to be able to suit the makeups more and more perfectly to the photography of each cameraman.

But although makeup cannot be absolutely standardized, experience has shown us that certain basic rules can in most cases be followed.

In the first place, we have learned that the general tone of the makeup must offer a definite degree of contrast with the natural coloring of the player. If a player is a brunette, the

makeup required is not—as one might suppose—a predominantly dark one, but a light one, in order to display the dark hair and eyes to the best advantage. Similarly, a blonde requires a comparatively dark makeup, not only to accentuate her bloneness, but because the cinematographer almost always lights blondes in a higher key than brunettes, using "hotter" back-lighting, and necessarily a higher-keyed front lighting in order to balance things.

Similarly, a cinematographer who works in extremely low key lightings—like Jimmie Howe, for instance—will get the best results if his players are made up in a relatively high key—in other words, if his players wear rather light makeups. This is because the lighter makeups will enable him to use less front light, and, accordingly, a lower key generally.

By the same reasoning, a cinematographer who works in a higher key—like John Seitz—requires darker makeups to balance the greater intensity of light that he plays upon the actors.

In this we have the key to the problem presented by the new film. In effect, the considerable increase in film sensitivity is the same as raising the key of the lighting. The secondary change in the film—its improved color-rendition—while it offered some new problems, proved to be vastly less troublesome than might have been expected.

This is because we have been working with panchromatic emulsions and incandescent lighting long enough to become thoroughly accustomed to its requirements. We had solved the major part of this problem years ago, when the first panchromatic film and Mazda lights so suddenly displaced the old ortho stock and hard lighting. In those days, it will be remembered, the predominant tint in makeup was a reddish yellow, while reddish rouges predominated, and blues, grey-blues, and even greens were used for highlighting. Then came Panchromatic film, with its radically different color-sensitivity. And with it came the soft, yellowish Mazda light. The problem was attacked concertedly by the American Society of Cinematographers and the Motion Picture Makeup Artists Association in the memorable "Mazda Marathon" held at the Roosevelt Hotel and Warner Bros. Studio, and, later, by the A.S.C.'s series of Panchromatic Makeup tests. Out of these evolved the present-day Panchromatic Makeup materials and technique. Essentially these consist of the use of a completely monochromatic makeup, predominately a brownish red throughout. The panchromatic cosmetics developed included a wide range of tones, all of this predominant shade, and so standardized that the recommendation of a given shade of grease-paint automatically indicates the proper accessories—powder, lining-color, rouge, etc.

Generally speaking, for panchromatic film, the average makeup for women would be based on No. 24 grease-paint, and for men on No. 26. With the introduction of the new Super-Sensitive Panchromatic film, however, our experience indicated that, since the increased sensitivity of the film was practically tantamount to a raised key of lighting, the obvious solution would be to go to a darker overall makeup. Just how much darker, however, had to be determined by actual experiment. Moreover, since the Fox Studio was the first to authorize a complete change to Fast Film (it did so within a few days after the announcement of the new type), our time for experimentation was severely limited, as there were several productions being delayed pending our recommendations.

(Continued on Page 24)



Above, left—Dyeing homespun wool in Dalecarlia. Right—Mr. Boyle photographing the weavers in the Dalecarlian school. Center—Dalecarlian Peasant types. Below—Two views along the famous Cota Canal.

A Cinematographer in Sweden

by **JOHN W. BOYLE, A. S. C.**

THOU ancient, Thou free, Thou mountain-high North-land,
"Silent, joy-rich and beautiful!"

So sing the Swedes about their country: it was the first song that we heard as we landed in Gothenburg, and the last we heard as we sailed away. Its words express more than any other phrases the memories that we brought with us, together with 30,000 feet of Multicolor film with which we had tried to create a living picture of this little-known country.

When Mrs. Boyle and I, accompanied by Ray Fernstrom, landed in Sweden last June, none of us, except perhaps Ray, who is both a cinematographer and a Swede, had any idea of the possibilities that lay before us. We knew that Sweden was, photographically speaking, virgin territory, and we had been told that it abounded in pictorial material. But we soon enough had proof of it! Immediately we set out from Gothenburg to Stockholm by way of the famous Gota Canal route, and found ourselves surrounded by pictures. Imagine sailing through the heart of Sweden—cruising along in a tidy little white steamer, alternately through narrow waterways leading through parklike forest and farmlands and across broad blue lakes. Imagine climbing hundreds of feet up and down quaint, hand-operated locks a hundred years old, then to sail along between tree-lined banks, while loaded farm-wagons jog along the shore, almost within arm's length of the deck-rail!

After reaching Stockholm, we made that city our base of operations, while we ranged far afield in search of pictures. One very interesting sequence we made in the ancient city of Visby, on the island of Gotland. This city was in its day (from the first century down to the fifteenth or sixteenth) one of the great commercial powers of the world. Its inhabitants were nominally merchant princes—and, when it suited them, pirates as well. Their commerce extended to the four corners of the earth until their city became indecently rich, and finally fell prey to a powerful neighbor-prince. But although this wealth has vanished (save for the ancient coins that one can still find buried) Visby is rich in legends and ruins. It is one of the few walled cities that remain, while within its great wall stand many quaint old-world houses, and the ruins of sixteen churches built in the days of Visby's greatness. Those days were long before the reformation, and, so tradition tells us, each church represents the penance of some merchant-prince for a lapse from the straight and narrow path of commerce into the easier ways of piracy! Be that as it may, the ruins remain, picturesque and beautiful, together with one church built in the thirteenth century and still used. We also found that many of the old medieval costumes were also preserved—and thanks to Ray's persuasive tongue we were able to use them in staging scenes which brought back a clear picture of what this lovely island of ruins and roses must have been in the days of its greatness.

Similarly, when we visited the province of Dalecarlia—or Dalarna, as it is known to the Swedes—we found it a rich storehouse of both the customs and the costumes of the past. Nearly everyone—gentlefolk, burghers, and peasants alike—cherish the traditional costumes of the province, and proudly wear them on Sundays and Holidays. We were fortunate in being there on Midsummer day—the greatest of their holidays. Then everyone in the community turns out, gaily bedecked in the bright costume of his particular parish, to help celebrate the return of summer. Undoubtedly these observances can be traced back to prehistoric, pagan rites: but what is of greater importance to cameramen is the fact that they are today pic-

turesque and colorful scenes. The brightly-clothed, happy people assemble from far and near for the celebration. First, they decorate their homes with tree-branches, and shower blossoms on friends and strangers alike. Then come the ceremonies of raising the village maypoles, followed by community dances around them—picturesque folk-dances that last through the long, sunlit night.

In addition to this we were able to revive for our cameras some of the picturesque "church-boats"—great rowboats in which whole villages used to row across Lake Siljan to attend church on Sundays. The boats that we used were more than a hundred years old, and were specially lent to us by the museum where they are preserved. Similarly, through the courtesy of a school of the old arts of spinning, weaving, and lace-making, we were able to picture these homely crafts that are so rapidly being forgotten by our industrial present.

That is one of the outstanding beauties of Sweden: although it is in every sense a modern, industrial nation, its people still cherish these links with the past. Not only do government and municipal museums have large collections of exhibits showing the home-life and culture of past generations, but so do many individuals. And this, I think, brings to Swedish life a quality that is deplorably lacking from American life: they live more simply, and take time to enjoy life more fully. Even the city-folk live close to nature, for everyone has some sort of a rural retreat in which he spends most of the summer. The rich have beautiful estates; the others at least manage to have their seaside or country cottages—or, if they cannot afford their own, they rent one, or board with some farmer or fisher family for the summer. Business-men spend the week at home in the city, and then on Friday hurry away to enjoy the week-end with their families in the country or at the seashore.

There are many other phases of Swedish life which are of interest to Americans, particularly certain of their progressive industrial and governmental policies. Unfortunately space does not permit me to mention many of them. But I cannot omit two: one is a mine in Dalarna which has been cooperatively worked since the year 1220! It was owned by several great noblemen, who—with amazing foresight for even modern industrialists, to say nothing of men of the thirteenth century—took their workers into partnership with them. How it has enriched the owners may be imagined from the fact that since the middle of the 17th century it has produced half a million tons of copper, fifteen tons of silver, and a ton of gold. It is now the greatest of Sweden's industrial concerns, having expanded in many directions until mining is no longer by any means its chief business.

The second feature is the well-known "Bratt System" of liquor control. By this method liquor is rationed out to the people strictly in accordance with their earning-power and the number of their dependents. A young, single man, with no dependents can get so much "hard liquor" each month: a family man, on the other hand, is allowed proportionately less, or, if his earning power is low, and his family large, none at all; either, however, may have as much light wine and beer as he desires. The result seems eminently satisfactory to all concerned—except to the chronic tipplers, who must go abroad for a really successful blow-out.

While in Stockholm we visited the studios of the Svenska Filmindustri, the leading producer. Although the market for
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A Standard Aperture for Sound Films

by **JOHN ARNOLD, A.S.C.**

ALTHOUGH the wide-film experiments of a year ago proved themselves only experiments, they have had at least one result of lasting importance in that they focused the attention of the industry on the unsatisfactory conditions existing as a result of the absence of a true standard for sound-film picture apertures. Therefore, although wide film is in itself a forgotten issue, it benefited the industry by starting the researches conducted by the American Society of Cinematographers, the Academy of Motion Picture Arts and Sciences, and by the various producers and manufacturers, which have resulted in the recommendation of a new standard of camera and projection apertures, which are already adopted by some producers, and are expected to soon become an industry-wide standard.

From the earliest days of the moving picture up to the advent of the movietone, the standard frame dimensions were .6795" x .906", giving a rectangular picture with a proportion of 3 x 4. This proportion, although determined and standardized largely by accident, has proven to be the most satisfactory one from both the artistic and psychological viewpoints. It is satisfactory for more than 90% of all possible compositions, and moreover probably the most restful proportion to



The former silent standard aperture (slightly enlarged)

watch for the length of time necessitated by the average feature picture. In a word, though it may not represent the absolute ideal proportion of the artistic purist, it is sufficiently close thereto to be considered ideal for all practical purposes.

The advent of the talking picture, however, necessitated an alteration of this proportion in order to accommodate the sound track, which arbitrarily sliced .1" from the left-hand side of the picture, leaving a practically square frame. This is an unsatisfactory proportion from every viewpoint. It is an almost impossible frame for the cameraman's efforts at composition, and a most unpleasant proportion for the audience which must concentrate upon it for an hour or more. Such a state of affairs could certainly not be allowed to exist; therefore several theatre-chains and some producers as well, independently adopted reduced apertures which restored the old 3 x 4 rectangle. Unfortunately, however, not all of them did so, while the producers using disc recording, and the theatres equipped only with disc reproducers naturally enough continued to use the old, silent-standard full-frame aperture.

Therefore picture-makers were faced with the necessity for planning their pictures to be suitable to several projection apertures: the old full-frame silent and disc standard, the movietone square, and the several reduced 3 x 4 movietone apertures. Every phase of production and exhibition suffered

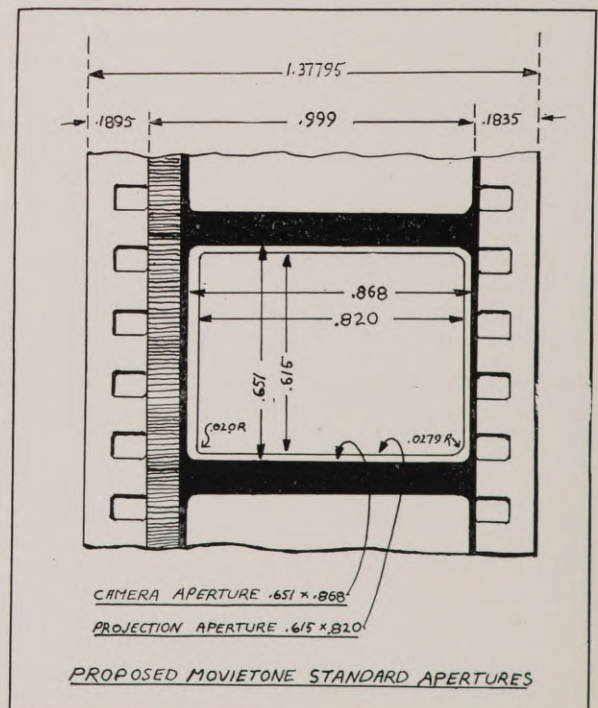


The new Movietone aperture

from this chaotic condition, and photography, naturally, more than any other. For even if a studio and the theatres controlled by its owners had standardized on one of these formats, the cameraman was forced to allow for all of the others in his compositions. Otherwise, when his pictures played the smaller houses, or the larger ones controlled by other interests, his scenes would be in danger of misframing—of having heads or feet cut off, or, if a larger aperture was used, of having his carefully planned compositions destroyed by the larger frame. Inevitably the quality of the photography suffered, and with it projection, sound, direction, and all of the other things that depend to any extent upon the work of the cameraman.

At this time, as a strictly temporary measure, the Academy recommended that all vital action be kept within a three by four rectangle marked on the camera ground-glasses, and made so as to suit as nearly as possible the various reduced apertures being used in the theatres. This was very helpful, but

(Continued on Page 42)



Proposed standard apertures

Lens Testing

by **DR. L. M. DIETERICH**

Consulting Engineer

AN EFFICIENT mechanic has not only to be familiar with the tools he is using, but the more expert he is, the more intimate he has to be with all the characteristics and working possibilities of the special tools which he requires for a special "job".

The cinematographer is in a very similar position, with the exception that he has to deal with two groups of "tools"—those of direct influence upon his work, which consist of the optical means at his disposition, and those of indirect influence, which are the emulsion characteristics of the films and the methods and results of their processing.

For the present the optical means only shall be considered or, more specifically, the photographic lenses, as supplied to him by the lens manufacturer.

If we realize that the art and more recent science of lens production are only a few decades old, it becomes truly impressive to observe the unparalleled speed of progressive evolution of this industry and its allied arts and sciences.

This impressiveness changes to admiration when we have the opportunity to study not only the number of intricate problems that have been solved within such a comparatively short period, but become aware of the extreme delicacy of mathematical calculations, of the necessary physical operations and last but not least of the continuously appearing chemical conundrums.

Nevertheless, the era of standardization has by no means been arrived at, especially as far as motion picture camera lenses are concerned and which we are for the purpose of this study solely interested in.

The present state of development brings upon the market and available to the cinematographer a great number of lenses of different characteristics.

There are various standards employed in lens manufacture resulting in characteristics stated by manufacturers as properties of individual lenses with the same terms or nomenclature but very often of different actual values for the same term. As an example, as shown by the comparative research work of Fred Westerberg, the calibrated or stated speed of two lenses of the same focal value, produced by two different manufacturers may be an entirely different speed in actual performance.

The cinematographer, therefore, faces the necessity of conducting a great number of tests and practical observations until he knows the essential characteristics of a new lens. He cannot afford to take such a lens into production work without becoming thoroughly familiar with its actual performance.

In order to eliminate these difficulties, the author has developed a method and commensurate equipment for lens test-

ing by which every lens as acquired could be tested before the same is used by the cameraman.

This method and equipment is beyond the financial reach of the individual cinematographer, is not as scientifically and practically perfect as those used by high grade lens manufac-

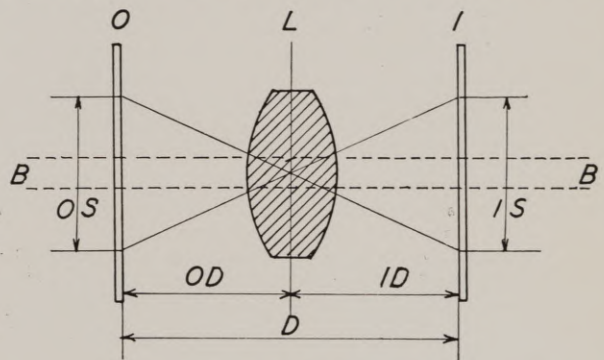


Fig. 2

turers, but will establish and determine such lens characteristics as of importance to the cameraman. It is well within the budget of a studio and of an investment and operating expense manyfold compensated, not only by increased average pictorial values of the produced pictures, but by an actual great saving in time and expense.

The following schematic presentation of methods and equipment deals point for point with such lens characteristics the cinematographer should reliably be informed about.

OBJECT OF TEST . . . FOCUS

METHOD OF PROCEDURE

1. Mount in succession on optical bench B. B. Fig. 1, adjustable mirror, M, sunlight filter, F, test lens, L, and ground glass, G. Move G to sharp sun image and measure background, BF.

2. Mount square ruled ground glass plate, O, in front of test lens, L, Fig. 2, and identical square ruled ground glass plate, I, in rear of L. Use unit magnification by focussing selected objective, OS, to become image IS on I. When ruled pattern on

(Continued on Page 26)

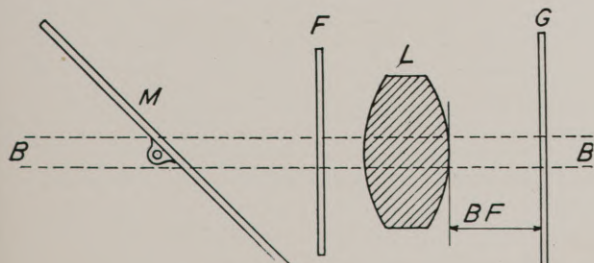


Fig. 1

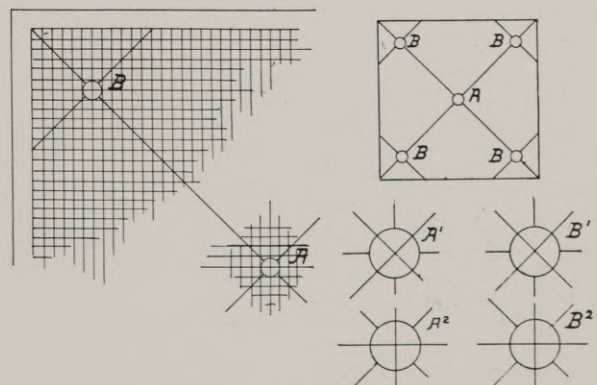


Fig. 3

Photographed by . . .

by HAL HALL

● **THE CAMERAMAN** is a good deal like the engineer who builds the foundation of a skyscraper: the rest of the edifice is built upon what he accomplishes; if he is successful, the very nature of his work draws attention away from itself—but if he makes the least mistake, it is painfully obvious. Wherefore it is only natural that our busy confreres, the screen and dramatic critics of the non-technical press, frequently overlook photography in writing their reviews.

But such is not, fortunately, always the case. There are reviewers—more and more of them, as time goes on—who consciously realize the importance of photography, who appreciate the magnitude of the photographer's contribution to a production, and who accordingly give photography its meed of space in their reviews along with acting, direction, story, and so on. The reviews of these writers are always welcome reading matter to a cameraman, even when he sees his work criticized adversely. They restore his confidence in himself and spur him on to greater efforts, for they are tangible proof that after all he is not photographing pictures artistically merely to please himself, but to please a great public that really wants well-photographed pictures. Of course he is most appreciative of the reviews that praise his work—who isn't?—but even those that do not are welcome, if they criticize it honestly and constructively. And when they single out his work for the superlative praise occasionally accorded exceptional performances of actor, director or scenarist, even the least emotional cameraman feels a new thrill of enthusiasm for his work.

Such a comment recently appeared in *Variety*. To be specific, it appeared in *Variety's* issue of September 29, 1931, over the signature of "Sid" himself. It was in a review of Fox Films' production of "Riders of the Purple Sage," which was photographed by George Schneidermann, A.S.C. When reviewed, this picture, although produced purely as a programme feature, was playing at the famous "Roxy" theatre in New York; an honor for which, in "Sid's" opinion, the photography was largely responsible. Many of the other reviewers who saw the film there may have thought so too—but "Sid" characteristically said so in no uncertain terms. Unfortunately, the space available does not permit us to reprint "Sid's" review in full, but in part it read as follows:

"This Zane Grey milestone is still a good western. Hardly for the de Luxe houses; but the Roxy is dressing it up by giving it a wide screen all the way. . . . As far as Fox is concerned, George O'Brien is Jim Lassiter, 3rd, even though it's the first time the character has had his voice amplified for an audience. Back in '18 this company adapted the Zane Grey tale and spotted William Farnum in it. Seven years later Fox tried it again with Tom Mix. Approximately another seven years and now O'Brien for the story's debut in sound. Those seven year lapses represent cycles in Hollywood, the studios generally figuring it suicide to remake a picture in any time less than that. Anyway, this cer-

tainly makes Lassiter the "Peter Pan" of the horse operas.

"Here the story gets dialogue for the first time, and that seems to be one of its troubles. Every so often the conversation becomes a little formal and stilted for Arizona in the middle of the nineteenth century. But George Schneidermann's lens ability plus a tot named Shirley Nails go a long way to overcome the inept talk. The photography, incidentally, is probably the main reason the Roxy decided upon the big screen. Any number of times during the screening it's obvious that Schneidermann's glass and the wide-angle projection lens are tossing bouquets at each other, as there are many instances when one enhances the other."

Thanks, "Sid." The American Society of Cinematographers is deeply appreciative of this tribute to one of its members. When you, or any of your busy fellow-critics, pays a cameraman such a tribute as that, you compliment every cameraman, for it is the aim of every cameraman to so execute his work that it reflects credit not solely upon himself, but upon his profession, as well. For the good of the profession, he works long hours at the studio or on location, making the best of every adverse condition, and often enduring hardship and even physical peril. More than that, outside of his regular working hours—when most of the other members of the company are enjoying sleep or needed recreation—the cameraman is putting in at his own expense long and arduous hours of study and research to the end that his work shall further enhance that of his fellows, the actors, director, and writer. To gain this end, the cameraman is ceaselessly experimenting with new apparatus—learning the intricacies of every new type of film or equipment—devising new methods and often new machinery—foregoing much of the ordinary pleasure of living, just that the photography of each successive production shall be better than its predecessors. He is not required to do this: the public seldom knows of it; his employers do not pay him any more for it—still he does it. **He is a cameraman.**

Therefore, when one member of the camera fraternity is singled out for such praise, it encourages not him alone, but also every one of his fellows. Every one of the scores of the "men behind the cameras" feels a revived desire to make each scene perfect; not that his camerawork may "steal the picture," but that it may advance the art of photography; that it may make the picture as a whole better. For although the goal of cinematography is purely to make good pictures perfect, and bad ones good, regardless of the credit that may accrue to the individual cameraman, the honest recognition of the critics—who are really the voice of the audience—is the highest reward that any artist can desire. Such recognition of the individual is also recognition of his fellows, and spurs them to new efforts to individually and collectively merit that praise. Knowing definitely that the public appreciates his work, what can a man do but strive even more earnestly to give them the best that is in him?

Color Photography in the Arctic

by **GLENN R. KERSHNER, A. S. C.**

Chief Cinematographer, MacMillan Arctic Expedition.

AT FIRST thought, the Arctic regions would seem the last likely place for color photography to prove valuable, for both natural and man-made coloration are at a minimum there, and the entire region is subject to almost continual fogs. What good, therefore, is a color-process when there are no brilliant colors for it to record?

In actual fact, however, it is exactly these unfavorable conditions that make natural-color cinematography invaluable to the Arctic explorer. Under the prevailing atmospheric conditions which I found in Labrador, I am convinced that either for commercial or scientific purposes, the records made by natural-color photography are infinitely superior to those made by the conventional black-and-white processes. In a region where a majority of the landscapes are composed of snow, dull grey sea, icebergs, and varying amounts of fog, no possible manipulation of film, filters, exposure, and laboratory handling can yield a satisfactorily defined monochrome picture. On the other hand, color cinematography will take advantage of every slightest chromatic difference between sea, sky, snow, and fog. The result is frequently pictorial, and always far more easily understandable to either the layman or the scientist.

I base my opinion upon the experience gained as Chief Cinematographer for Commander Donald B. MacMillan's 1931 Arctic Expedition. In that capacity I photographed more than 20,000 feet of Multicolor, and a considerable amount of black-and-white, as well. Both were photographed largely under the uniformly unfavorable conditions outlined above—at times, even, in worse ones, with snow, rain, or hail falling. In every case, the color films produced by far the best results.

The chief difficulties encountered in Arctic cinematography, aside from the general lack of coloration in the subjects, are the weather, and the difficult working conditions naturally incident to the climate and the limited amount of equipment that can be carried. The weather is, of course, the greatest stumbling-block. Upon referring to my diary, I find that we enjoyed scarcely a week of 100% photographic weather throughout the whole summer. As a rule, an hour or so of sunshine scattered through three or four days was the best that we could hope for. Obviously, since the expedition's work had to go on, we had to photograph many scenes under conditions that would be considered impossible here in Hollywood. That a larger part of the resulting negative was not only printable, but entirely satisfactory I regard as a tribute to the excellence of the color system used, and to its adaptability to Arctic conditions rather than to any personal achievement.

A great deal of the work was done from the air. The expedition was equipped with a speedy Lockheed seaplane which was piloted by Lt. Charles Rocheville, U.S.N.R., one of the most capable pilots with whom I have ever flown. I can never pay high enough tribute to the skill which he exhibited in flying us for thousands of miles through unbelievably bad weather and over uncharted and dangerous areas. Perhaps the greatest praise I can give him is to cite the fact that on every flight—no matter how perilous—he always brought us back to our base safely and with our objective accomplished.

A very important part of my work consisted of making a complete film record of the daily lives of the Eskimos. Having previously filmed almost every tribe of American Indians, I found this a fascinating task. The Eskimo of today still lives the primitive life of the days before the coming of the white man. He has to! No other mode of life is so well adapted to

his surroundings. Save for medical aid, the white man has very little to give the Eskimo; while, on the contrary, if he is going to live in the Eskimo's country, he can learn a great deal from the native. The history of Arctic exploration is full of tales of white expeditions which starved to death in the midst of plenty—simply because they knew too little of the Eskimo's ways of wresting a living from the land.

It was my task to chronicle, as completely as possible, the Eskimo's ways of living. Having worked with primitive people before, I knew that success in my efforts must depend upon first winning the complete confidence of my subjects. In this I was aided immeasurably by being a member of Commander MacMillan's party, for MacMillan is known and loved by every Eskimo. He has studied them and their needs for years, and



Mr. Kershner and Commander MacMillan
at the start of the Expedition.

he knows how to aid them without robbing them of their natural independence. With this introduction, I found it easy to win their confidence and cooperation. My first step was always to appeal to their sense of humor. My previous experience with Indians had shown me the fallacy of the general conception of the Indian as a dour and unsmiling person: quite the reverse, for once you have gained his confidence, you find that the Indian has a very pronounced sense of humor. The same is true of the Eskimo, if anything, to a greater degree, for they are a cheerful, happy-go-lucky race of grown-up children, always willing to laugh today, and to postpone worry until tomorrow. So in making my pictures of Eskimo life I would begin by making them laugh. In this part of the work, my guitar and mouth-harp were quite as valuable as my camera. Once they had paved the way, the whole community would be eager to help me film their work, their play, and their homes. And, speaking of their homes, I was greatly surprised to find that the Eskimo seldom use the snow-block igloos in which we picture them, but rather large skin-walled lodges stretched over frameworks of bone or wood, and called **Tupiks**.

The hand-crafts of these people are surprising, both in the manufacture of their weapons and their clothing. The way that the women sew the heavy skins, chewing each seam until the hide is sufficiently pliable for them to make their tiny stitches with caribu-sinew and crude bone needles, always

(Continued on Page 24)

HAL HALL

says



11 Years of Progress

JUST ELEVEN years ago this month the first issue of the American Cinematographer made its appearance. Just a little, four-page paper, telling the news and latest developments in the cameraman's field. A little paper that was established to further the best interests of camera-work and cameramen, and published by the American Society of Cinematographers.

No one even dreamed then that this little paper would some day develop into the world's leading magazine dealing with motion picture photography and all of the allied technical phases of the motion picture industry; that it would become an outstanding publication for thousands of home movie-makers. In fact, no one then dreamed that the business of home movie making would become such a tremendous industry as it has.

Gradually, this little paper made its influence felt, and the natural result was that it changed from a paper issued twice-a-month to a magazine that in time became an authority in its line throughout the entire world. And that is just what the American Cinematographer has done. Backed by the members of the American Society of Cinematographers, this magazine has been a constant source of help to thousands, and has done its part in the development of the technical side of the industry, not only along photographic lines, but in other branches, as well. Its aim has always been advancement, and it has helped the advancement of photography throughout the years.

It has kept step with technical progress, as, for example, its part in the spreading of technical information regarding sound at a time when sound was in its infancy and sources of information on this subject were decidedly limited. Sound being closely allied with photography, it was a natural step to take. But there have been many who did not take the step.

The same was done in the realm of the amateur motion picture maker. When this art began to develop this magazine turned to the business of trying to help the amateur. We feel it has done much in this line, giving information that could be found in no other publication because of the background and experience of the men of this organization.

And now as the magazine starts its twelfth year of service, it starts it with a move for the amateur that is outstanding. Throughout the world there are hundreds of individuals and clubs that are working ceaselessly to create pictures, made by amateurs, that are of real worth. This magazine is now going to give these amateurs an opportunity to secure not only financial regard for their efforts, but International recognition, as well. It has announced a contest for the amateurs in which a thousand dollars in prizes will be awarded and the makers of the pictures will be made known throughout the world.

Surely, this magazine has established a record that its sponsors, the American Society of Cinematographers, may well be proud of. And it is the hope of all connected with it, that during the years to come the American Cinematographer may continue to go forward spreading helpful information and instruction to all who are interested in the photographic art, and those other technical activities so closely allied to the business of motion picture photography.

Our New Cover

WITH this issue of the American Cinematographer we introduce a new type of cover to our readers, and sincerely hope that it will be as pleasing to you as it is to us of the staff.

For some time we have been of the opinion that the type cover we have used for the past two years is not the right kind for a magazine of the type of the American Cinematographer. While these covers have been attractive they gave an air of the "fan" magazine to the outside of the publication. With the new cover we feel that we have something that will appeal to the reader and that will catch the eye of those who are interested in the type of content which we have in our magazine. We intend to retain this cover for some time, and hope that you will never fail to see it stand out among the other publications on the news stands and in the photographic supply dealer's store.

Our Prize Photographs

ON THE opposite page, and the two following pages, appear four photographs that have been entered by our readers in the photographic competition conducted by this magazine. This competition started with the October number. All pictures appearing in the pictorial section of the magazine from October, 1931, up to and including the issue of September, 1932, will be entered in this competition. A cash prize of \$100.00 will be awarded for the best picture; the second award will be \$50.00 and the third award will be \$25.00. The selection of the winners to be made by a special board of judges appointed by this magazine.

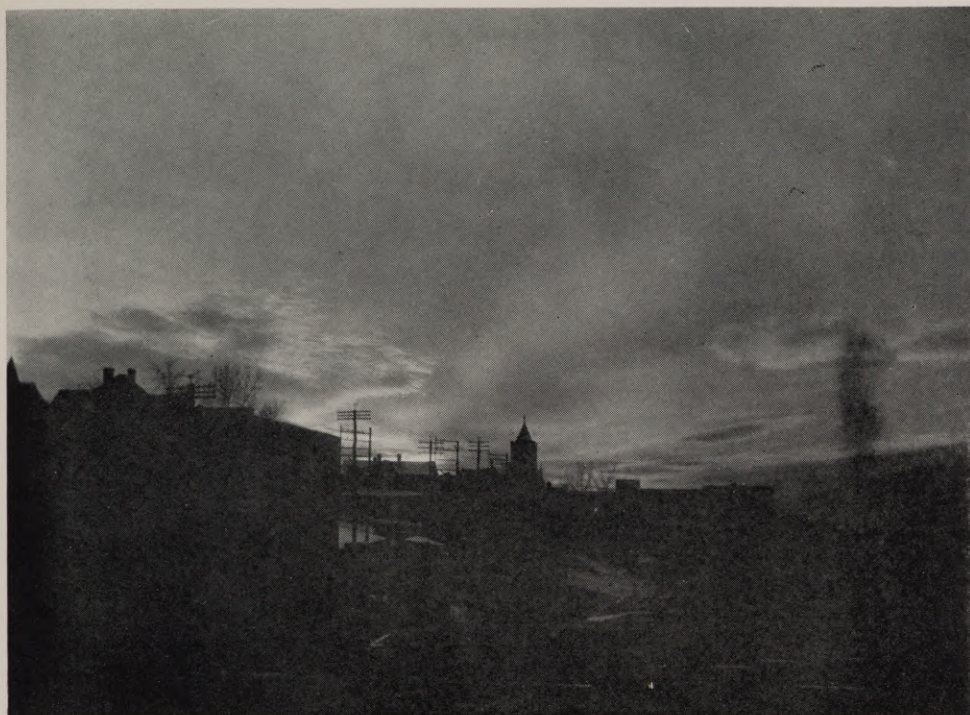
This competition is open to all subscribers to this magazine, either professionals or amateurs. The only condition is that no person may enter a photograph unless he, or she, is a bona fide subscriber. If you are not a subscriber and wish to enter photographs, just send in your subscription for a year with your photographs.

The photographs this month were entered by Nicola Buzzo, an amateur, of Blue Field, West Virginia, and Frank Tanner, a professional, of Hollywood. This is a splendid opportunity for photographers to place their work before the eyes of the people in the motion picture studios, and wise photographers should not miss the opportunity. No "snapshots" will be considered. All pictures should be well mounted on not less than 8 by 10 paper.

That Christmas Present

CHRISTMAS is still quite some time away, but it will soon come sneaking in on us, and it seems that now would be a good time to start thinking about the Christmas gifts we intend to make. With that thought in mind, may I suggest that to the amateur or professional one of the finest and most reasonably priced presents you can give will be a copy of the Cinematographic Annual. Volume 2 will be available for your Christmas shopping, and it will solve a lot of your problems. Why not plan to give several of them this Christmas?

Incidentally, anything photographic will be greatly appreciated by the amateur or professional photographer or cinematographer, so just keep photographic minded when you are selecting your presents. Read the advertisements in this journal carefully and we bet you will make some friends happy if you select some of the things advertised here as Christmas gifts. Make this a photographic Christmas.



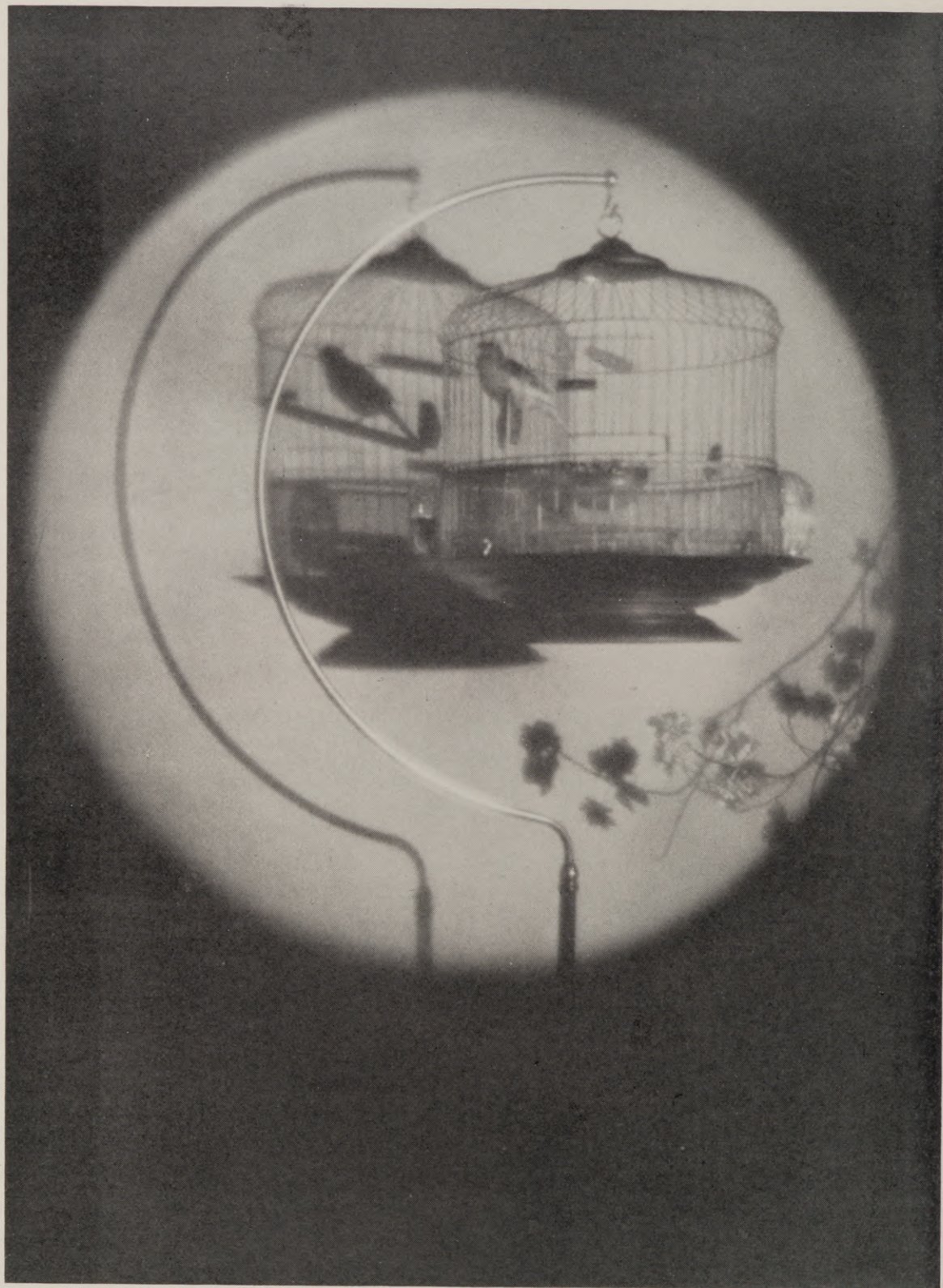
Dawn

Nicola Buzzo



Arteries

Nicola Buzzo



Little Captive

Frank Tanner



Shattered Dreams

Frank Tanner

S. M. P. E. Fall Meeting

A. N. Goldsmith Elected President

DR. ALFRED N. GOLDSMITH, Vice-president and General Engineer of the Radio Corporation of America, was elected President of the Society of Motion Picture Engineers at the Annual Fall meeting of the society, held last month at Swampscott, Massachusetts. He succeeds John I. Crabtree of the Eastman Kodak Laboratories, who has held the position for the past two years, and much general satisfaction was expressed over the selection.

Other officers chosen were: E. I. Sponable, Vice-president; J. H. Kurlander of Westinghouse, Secretary; Herford T. Cowling of Eastman Kodak, Treasurer.

Attendance at the Fall meeting was even larger than at the Spring meeting held in Hollywood, and there was a certain air of enthusiasm that bodes well for the continued advancement of the S.M.P.E. One of the outstanding features of the meeting was the apparent desire on the part of all to bring the laboratory much closer to the practical business of creating more appealing entertainment. Very definite suggestions made by the retiring president were apparently motivated by this spirit, and they were subsequently reechoed by the newly elected president. Declaring that his visits to studios showed him that reproduction in the theatre has not kept pace with recording, Mr. Crabtree cited three reasons—deficiencies in maintenance of equipment, poor release prints and imperfect projection.

"The motion picture today", said Mr. Crabtree, "is also too much of a machine. More atmosphere and glamour could be created by individuality in the technical presentation of the picture." He then suggested that color be the next major field of development for the motion picture.

There were many unusual papers and demonstrations at the meeting, but standing far above all else was the marvelous advancement in disc recording shown by the demonstration of the Bell Telephone Laboratories. This demonstration of recording on disc challenges the present ascendancy of sound-on-film, and even suggests a return to the original sound method. The technicians have gone back to Edison's vertical method of recording, as he used on his records; and showed the convention something in the way of results that sent every member home talking about it.

This paper described recent progress which has been made in laboratory studies of mechanical records of sound cut on a wax disc. Both theoretical and experimental investigations indicate that a phonograph record cut with vertical undulations instead of the more usual lateral undulations possesses fundamental advantages. The principal improvement comes from a marked increase in the volume and frequency range over which faithful reproduction may be obtained. A higher volume level can be recorded for the same groove spacing and speed. More playing time can be provided with a given size record and volume level since, for these conditions, both the groove spacing and speed may be reduced. Improvements in methods of processing the stampers and in the record material give a large reduction in surface noise and hence a corresponding increase in the volume range. With these improvements the frequency range which can be satisfactorily reproduced can be extended nearly an octave to 8,000 to 10,000 cycles. Other improvements incidental to the improvements noted above are, great improvement in the quality of reproduction obtainable directly from a soft "wax" record and a great extension in the life of the hard record.

Another interesting feature of the meeting was the emphasis that was placed upon the 16 millimeter field. No less than

four very unusual papers were presented, and interest was high in this line.

Following is a list of the entire list of papers that were read before the society:

- "Air Conditioning by the Silica Gel Method," by E. C. Holden, Silica Gel Corp., Baltimore, Md.
- "Utilization of Desirable Seating Areas in Relation to Screen Shapes and Sizes and Theater Floor Inclinations," by Ben Schlanger, New York, N. Y.
- "Design and Construction of Motion Picture Sets," by William Sauter, Paramount Publix Corp., Astoria, New York, N. Y.
- "Some Recent Educational Film Experiments," by Glenn Griswold, Fox Film Corp., New York, N. Y.
- "The Optics of Projectors for 16 mm. Film," by A. A. Cook, Bausch & Lomb Optical Co., Rochester, N. Y.
- "Mechanical Advantages of the Optical Intermittent Projector," by J. L. Spence, Akeley Camera, Inc., New York, N. Y.
- "A Sound Motion Picture Projector for 16 mm. Film," by R. A. Miller and H. Pfannenstiehl, Bell Telephone Laboratories, New York, N. Y.
- "Advantages of 16 mm. Supersensitive Panchromatic Film in Making Medical Motion Pictures," by R. P. Schwartz, University of Rochester, Rochester, N. Y., and H. G. Tuttle, Eastman Kodak Co., Rochester, N. Y.
- "Proposed Standards for 16 mm. Sound on Film Dimensions," by R. P. May, RCA Victor Co., Camden, N. J.
- "Proposed Changes in the Present Standard 35 mm. Film Perforation," by A. S. Howell and J. A. Dubray, Bell and Howell Co., Chicago, Ill.
- "Motion Pictures in Relief," by H. E. Ives, Bell Telephone Laboratories, New York, N. Y.
- "A High Speed Stroboscope," by H. E. Edgerton, Massachusetts Institute of Technology, Cambridge, Mass.
- "Recent Improvements in Thermionic Devices," by M. J. Kelly, Bell Telephone Laboratories, New York, N. Y.
- "Studio Organization," by Carl Dreher, RKO Studios, Hollywood, Calif.
- "A Method of Directly Measuring Distortion in Audio Frequency Systems," by W. M. Tuttle, General Radio Co., Cambridge, Mass.
- "Size of Image as a Guide to Depth of Focus in Cinematography," by J. F. Westerberg, United Artists Studio, Hollywood, Calif.
- "Development of the Light Valve," by T. E. Shea, Bell Telephone Laboratories, New York, N. Y.
- "Vertical Sound Records; Recent Fundamental Advances in Mechanical Records on Wax," by H. A. Frederick, Bell Telephone Laboratories, New York, N. Y.
- "Western Electric Noiseless Recording," by H. C. Silent, Electrical Research Products, Inc., Hollywood, Calif.
- "A New Bell and Howell Printer," by J. A. Dubray, Bell and Howell Co., Chicago, Illinois.
- "The Bomb Microphone," by W. C. Miller, M-G-M Studios, Culver City, Calif.
- "Studio Projection and Reproduction Practice," by J. O. Aalberg, RKO Studios, Hollywood, Calif.
- "Sound Recording for Independent Productions," by L. E. Clark, Clarco, Inc., Hollywood, Calif.

(Continued on Page 24)

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Mary Pickford Planning Smashing Comeback

MARY PICKFORD has had her ear to the ground for some time, and has decided that the time is about ripe for her to step in and make a motion picture that has none of the odor of the sexy or gangster type of entertainment.

According to those close to Miss Pickford, she plans to go back to the type of role in which she became "America's Sweetheart." Miss Pickford in a statement issued recently declared: "I am most anxious to do a feature picture which will bring back the vast audience of children which in the last few years has so definitely fallen away from the motion picture theatre. I feel, too, that the present mood of the public will be particularly receptive to the sort of film entertainment which I feel best qualified to do".

At this writing Miss Pickford is enroute to New York where she hopes to close a deal for screen material which she believes will be suitable for her comeback.

S. M. P. E. Fall Meeting

(Continued from Page 22)

- "Mechanism of Hypersensitization," by B. H. Carroll and D. Hubbard, Bureau of Standards, Washington, D. C.
- "An Experimental Study of Several Methods of Representing Photographic Sensitivity," by R. Davis and G. K. Neeland, Bureau of Standards, Washington, D. C.
- "The Variation in Emulsion Speed with the Distribution of Energy in Sources of Equal Visual Intensity," by R. Davis and G. K. Neeland, Bureau of Standards, Washington, D. C.
- "On the Assignment of Printing Exposure by Measurement of Negative Characteristics," by C. M. Tuttle, Eastman Kodak Co., Rochester, N. Y.
- "The Reducing Action of Fixing Baths on the Silver Image," by J. I. Crabtree and H. D. Russell, Eastman Kodak Co., Rochester, N. Y.
- "A Device for Printing Sound Films," by R. B. Wood and S. Watson, Jr., Rochester, N. Y.
- "Gamma by Least Squares," by D. R. White, du Pont Film Mfg. Corp., Parlin, N. J.
- "Speed in Camera Lenses and Emulsions," by Lewis Physioc, Hollywood, Calif.
- "Depue Automatic Sound Printer," by O. B. Depue, Chicago, Ill.
- "Special Process Technic," by Vern Walker, RKO Studios, Hollywood, Calif.
- "Sound in the Los Angeles Theater, Los Angeles, Calif.," by D. M. Cole, Electrical Research Products, Inc., New York, N. Y.
- "Thermionic Control of Theater Lighting," by B. S. Burke, Westinghouse Electric and Mfg. Co., Pittsburgh, Pa.
- "Sound Motion Picture Projector Equipment for the U. S. Navy," by S. W. Cochran, RCA Victor Co., Camden, N. J.
- "Acoustical Treatment of Madison Square Garden," by S. K. Wolf, Electrical Research Products, Inc., New York, N. Y.
- "Lighting the Modern Theater," by F. M. Falge, Beaded Screen Corp., New York, N. Y.
- "The Screen—A Projectionist's Problem," by F. M. Falge, Beaded Screen Corp., New York, N. Y.
- "Low Amperage Reflecting Arc Lamp for Portable Sound Equipment," by H. H. Strong, Strong Electric Co., Toledo, Ohio.

M. E. England Installing His New Sound Equipment

M. E. ENGLAND of Pittsburgh, who recently re-entered the sound equipment business here, announces installation of his new sound-on-film device at St. Mary's College, Northeast, Pa.; Woodies theater, Apollo, Pa., and the Pearl theater, Youngwood, Pa.

Known as the M. E. England sound-on-film equipment, two sound heads are being offered at a low price by the distributor. England also furnishes speakers, amplifiers and other theater supplies.

Make-Up For Fast Film

(Continued from Page 11)

Thanks, however, to the excellent cooperation granted us by the camera department and its individual members, we were able to conduct these tests in record time, and so satisfactorily that the only changes necessary have been those required by minor modifications of the film characteristics since its introduction. As we had expected, the new stock demanded a darker makeup. To be exact, we found that generally speaking the increase required was a makeup two numbers darker than that which would be used on the old stock under identical conditions. This, of course, is subject to the individual technique of the cameraman: but taking an average, the new film indicates the use of a No. 26 makeup for women, and a No. 28 for men. These, of course, are only generalities, since there must be allowances made for the darker makeups required by blonde types (which can usually be achieved by using powder one shade darker than the grease-paint), and by the individual lighting technique of the supervising cinematographer.

Makeup, let me repeat, can never be rigidly standardized. Each player, each picture, each scene presents its own individual problems. They can never be solved by rule, nor by the unaided efforts of one man, for success in makeup must be predicated upon not only intelligent, not to say imaginative, use of the materials at hand, but upon equally intelligent, whole-hearted cooperation between the supervising makeup artist and the supervising cinematographer. The one need not be an expert photographer, nor the other a skilled cosmetician: but each must know enough about the other's work and problems to be able to cooperate freely and efficiently, and to appreciate the other's difficulties without being told of them. Where this condition prevails, we can always be sure of the best of photography and the best of makeup—ideally attuned to each other.

Color Photography in the Arctic

(Continued from Page 17)

amazed me. A great part of an Eskimo woman's life is spent in chewing hides, and it is only natural that many of them literally chew their teeth away: here is an example of the understanding aid that Commander MacMillan brings to these people, for every season his dentist makes dozens of sets of false teeth for Eskimo women, restoring them to usefulness.

In filming these native crafts, color photography is again valuable, for only through it can we distinguish between wood and bone, and fully appreciate the beautiful patterns in which the Eskimo women make their clothes. For while they do not know weaving, they nevertheless arrange the different furs of which the garments are composed in remarkably effective patterns. And it is only through color photography that these can be appreciated. In fact, it is only through color photography that we can fully record any phase of Arctic life.



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Day, Night Travelsign Placed On The Market

MARKETED under the trade name of "Motolog," a new day and night travelsign especially designed for theaters to attract attention as well as put over a message, is being put out by the Travelsign Trailer Service, Inc., of New York.

The new device delivers a message of 75 words, is brilliantly illuminated in multi-colors and is visible from a great distance, the company declares.

New Disc Marketed By RCA Photophone

RCA Photophone has launched distribution of a new type of disc record developed and perfected by the engineers of the RCA Victor Company at Camden. The new disc is called the Victrolac record.

Advantages cited for the new record over the old style of shellac record are: reduction in size to 12 inches diameter, reduction in weight from 24 ounces to four, flexibility, durability, improved tone quality and a minimum of surface noise.

"Ninety per cent of the producing corporations already have arranged with us to employ this record in transferring the sound tracks of their sound-on-film production for disc reproduction," said Lowell V. Calvert, manager of the department of recording operations.

Lens Tests

(Continued from Page 15)

I becomes identical in size ($IS=OS$) of projected pattern of O, then focus $F = D/2$. If unit magnification is NOT used,

$$\text{then } F = ID = \frac{D \times IS}{OS \times IS}$$

3. Locate and mark on lens mount position of optical center, OC, as measured from rear surface of lens; such distance being the difference between focus and back focus, or $= F - BF$.

4. Check by measurement the relative position of optical center and diaphragm (Iris) plane.

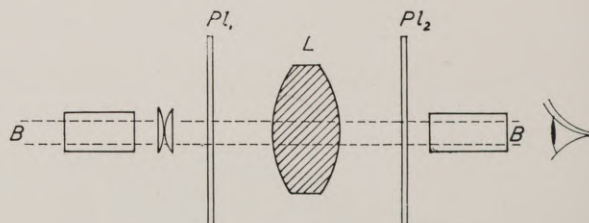


Fig. 4

EQUIPMENT

One swivel mirror. One Moore filter, No. 1. One ground glass. Optical bench. One adjustable lens holder. Two square-ruled ground glass plates. One adjustable lens holder. One projection lamp and condenser system for back lighting of Plate 1. One ocular magnifier. Figures 3 and 4 illustrate schematically the equipment.

(To be continued next month)

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..In the Realm of Sound..

Invention Records Sound On Undeveloped Film

A YOUNG FRENCHMAN, Rene Nublat, claims to have invented apparatus which permits the instantaneous recording of sound on film without the film's first having to be developed. He asserts that its adoption will result in a great saving of money to producers. He will soon give a demonstration of his invention to the film trade in Paris. His invention, he says, records mechanically, aided by electrical apparatus.

New X-Cell Sound Unit

R. Z. GLASS, owner of Public Address Service Co., distributors of X-Cell A.C. sound equipment, has announced the marketing of the "Paseo" junior and senior portable sound-on-film equipments manufactured in his own plant.

The projector and heads are said to be mounted in a steamer trunk-like case and speaker and amplifier are housed in smaller carrying cases. Reduction in prices on his X-Cell sound-on-film for theaters where disc is now installed, and reduction in complete X-Cell installations, have also been announced by Glass.

Make Low Outright Price on Universal Sound Unit

DESIGNED so that it is especially adaptable for theaters of 250 to 5,000 seating capacity, a sound-on-film device known as the "Economy" model and sold outright at a new low price is being put out by the Universal Sound System, Inc., of Philadelphia.

Some of the principal features claimed for the new Economy model include: full A. C. or battery operation, dynamically and statically balanced spiral gear drives, no chains, micro adjusted exciter carriage, half-inch main drive shafts and split guide rollers.

The cost of operation and upkeep with the Economy model must be lower, the company declares, because of the simplicity of design, the ruggedness of construction and the standard quality maintained throughout in material and workmanship. The model fits Powers, Simplex, Motiograph, Erneman, Hans Gurz, etc., projectors, the company claims and can be arranged for A. C. or battery operation.

New De Luxe Portable Put Out By Photophone

RCA Photophone, in addition to its recently introduced new portable sound reproducing equipment which was designed to meet the requirements of educational and industrial institutions, has developed a new de luxe special size equipment for the non-theatrical field. With the sound heads, amplifier and loud speaker which comprise the reproducing unit, a twin turntable, non-synchronous phonograph with power amplifier is included. By connecting the power amplifier for the phonograph to the output of the voltage amplifier, sound of sufficient volume for adequate distribution in an auditorium containing 150,000 cubic feet of space may be developed.

This volume of sound, it is said, is approximately the same as that to which the Photophone Standard size equipment is adapted. Two loud speakers may be used if desired, but only one is supplied with each unit.

Photographing Arc Lamp Is Marketed by Blue Seal

AN INEXPENSIVE carbon arc lamp, known as the Photo-Sun Lamp, for use in theatres using considerable photography for exploitation and advertising purposes, and adaptable to many other uses, has been developed and is being marketed by the Blue Seal Products Co., Inc., of Brooklyn.

It is made in two models, working on 110 volts a.c. One model is said to give an equivalent of two 1,000-watt incandescent bulbs, operating at from 10 to 12 amperes. The other model gives a light equivalent to 3,500 watt, and operates at 18 amperes, either a.c. or d.c., it is stated.

New German Recorder

CHEAPER apparatus for the making of talking pictures is promised in a new sound recorder system using the Braun valves and requiring but one-tenth watt for operation. Small producers in Germany are particularly interested in the apparatus because it is made to rent or sell at a much lower price than that charged by the big electric companies. If the new apparatus comes up to expectations, small producers hope to be able to stay in business.

Remote Control Offered for All RCA Equipment

ESSANNAY Electric Manufacturing Co. of Chicago is now offering a new Strong Remote Volume Control for all RCA equipment.

By the simple operation of a conveniently located push button, the device will regulate sound volume control instantly. Is inexpensive, easy to install, and there is nothing to get out of order, the company claims.

New Aluminum Screen

A NEW all-metal screen has been installed in the Metropolitan, Boston. This screen is the product of the Whiting & Davis Co. of Plainville, nationally-known makers of ladies' mesh bags. The screen is made up the same way that these mesh bags are fabricated, with millions of little aluminum squares linked together so that the whole fabric is flexible.

This is claimed to be one of the first absolutely fireproof sound screens to be put on the market.

Photophone in India

BUSINESS in the motion picture theatres of India appears to be booming, if the constantly increasing number of installations of sound reproducing apparatus may be taken as a criterion. Recently Van Ness Philip, manager of the foreign department of RCA Photophone, Inc., has received orders for ten complete units of equipment from Madan Theatres, Ltd., and Alex Hague, authorized distributors for Photophone in Bombay, and to these most recent orders may be added seventy-four units which have been installed in theatres in various sections of India during the past eight months.

Laboratory Department

Conducted by EMERY HUSE, A. S. C.

Principles of Sensitometry and Their Practical Application

Part 7

A BEGINNER in sensitometry might at this stage believe that all sensitometric work is done with a lamp standard whose color temperature rating is far below the rating of those sources used in actual production of motion pictures. It will be observed by examination of Table I in the preceding article that no satisfactory standard of luminous intensity is available which even approaches sunlight. In Table II of the preceding article it will be observed that the color temperature rating of sunlight is 5400°K. However, even the beginner of sensitometry knows that we do not use sunlight, actually, in sensitometry and that artificial sources of light are made use of in this type of work. To use these low color temperature sources it becomes necessary to use a selectively absorbing filter between the light source and the exposure plane in order to obtain the desired spectral quality. For many years the cylindrical acetylene flame standard has been used as the light source for sensitometric work but for sensitometric work involving speed determinations it was always used in combination with the Wratten No. 79 filter. The radiation emitted from this combination of acetylene and the No. 79 filter matches very closely in color that from noon sunlight. It must be realized of course that this match is not precise but the departure from actual matching is not sufficiently great to be at all serious from the practical standpoint. Many tests have been made which show that speed values determined with the acetylene flame plus the 79 filter using photographic materials differing widely in spectral sensitivity agree very closely with speed values obtained by the use of actual sunlight. The 79 filter is very stable and can be manufactured to within narrow tolerance limits and then standardized with the required precision. It has been found that this combination of acetylene and the 79 filter gives a very satisfactory standard source for the sensitometry of negative materials.

Use is also made of tungsten lamps operating at color temperatures in the neighborhood of 2400 to 2600°K. Special filters are made to convert lamps of such color temperatures to sources of appreciably higher color temperature.

It is also possible to make liquid filters which can be used with artificial sources of low color temperature and which filters raise the effective color temperature of the source.

It can be seen, therefore, that it is possible to have sensitometry on a laboratory basis of such precision that exposures made in the laboratory on a sensitometer can be used as a guide for the processing of films exposed under practical conditions, i.e. picture negative, etc.

It is interesting to note at this point in discussing this subject of light sources used for sensitometric exposure that the International Congress of Photography has for some years been attempting to standardize a satisfactory unit of photographic intensity. At the Seventh Congress which met in London in 1928 a resolution was passed adopting a 2360°K. source screened with a liquid filter as a means of realizing the international units of photographic intensity, which is defined as one visual candle-power of radiation of the quality emitted by the source filter combination. A detailed description of the Davis-Gibson filter may be had by reference to the Transactions of the Society of Motion Picture Engineers Volume 12, No. 33, April 1928.

Technicolor's Vital Patent

WHAT APPEARS to be a sweeping victory in the color field has just been scored by Technicolor by the issuance of a patent, embracing 234 claims covering phases of color production, to Dr. Leonard T. Troland, of that company. The patent is said to cover rights which have been in dispute since 1921.

Dr. Kalmus, president of Technicolor, declares that, in his opinion, the claims granted will give Technicolor power over the majority if not all of the various methods of manufacturing color films. The patent is said to be unique in that its 234 claims constitute the largest number ever issued on a single patent by the United States Patent Office. It was first applied for by Dr. Troland, who is Technicolor's research director, in 1921.

Technicolor says the patent gives it the sole right to employ "the fundamental idea and method for coloring motion pictures and making both a negative and a positive print consisting of a layer of emulsion sensitive at different depths to different colors of light."

Dr. Kalmus further says that the patent embodies a large number of claims on the method of using two or more films, or two or more layers of emulsion.



New Device To Regulate Sound Receives Patent

EUGENE S. HALFORD, New Orleans engineer, has recently patented a device called the Rototone, which he claims can facilitate the means whereby sound may be accurately taken from or added to a motion picture and which can control sound volume at specified points, allow additions in sound without increasing the length of the film and provide the director with a chart whereby he has a record of each one-hundredth inch of film taken, which, when turned over to the cutting room, may serve as a guide to piecing scenes together.

The device consists of a cylinder, over which is placed a chart divided into squares by closely spaced lines; an electric stylus on an arm, which moves over this chart governed by an electro-magnetized sleeve. The stylus is also electro-magnetized and the chart is cut away in place to allow contact which governs the starting and stopping of sound recording devices, amplifiers, volume controls, or extraneous sound or light effects at a predetermined position in accord with the images of the film.

The patent, it is understood, has not yet been disposed of, nor is early marketing of the device anticipated. Halford began the invention before the advent of talking pictures. The basic principle is that of the range finder on war vessels.

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Notes of the Motion Picture World

Levee Heads Academy

M. C. LEVEE, executive manager of Paramount Studios, last night was elected President of the Academy of Motion Picture Arts and Sciences. He succeeds William C. de Mille, who has held the office for the past two years.

Other officers elected were—Conrad Nagel, re-elected Vice-President; Fred Niblo, re-elected Secretary; and Frank Lloyd named as Treasurer. Clinton Wunder and Lester Cowan were re-elected Executive Vice-President and Executive Secretary, respectively.

Carry Your Censor

HEREAFTER American newsreel cameramen must hire a government censor to accompany them on picture-making trips under a new censorship just imposed. Films will be inspected and sealed by the Interior Department before shipment to the United States, and will be shipped direct to the Mexican consulate at their destination, where the seals will be broken and the films forwarded to the respective companies.

A Good Move

SETTING A PRECEDENT in the motion picture industry for relief of the unemployment situation, the RKO-Pathe studios have established a six hour working day for men of the construction force. This move, instituted by Dave Garber, superintendent of construction, will increase the number of men employed by twenty percent.

Workers affected by the new schedule include carpenters, painters, grips, plasterers, laborers and such construction specialists as blacksmiths. Under the setup, the construction force is operated in two shifts. The first works from eight o'clock in the morning until 2:30 in the afternoon, with a half hour off for lunch. The second shift goes on duty at 2:30 and takes the half hour off for the evening meal.

Not only does the six hour day provide employment for many more men but it allows the workers added time for leisure and recreation which Garber believes will be reflected in increased efficiency on the job.

Block, McGuinness to Columbia

JAMES K. MCGUINNESS and Ralph Block have been engaged by Columbia to take part of the production activities off Harry Cohn's shoulders.

With Cohn, they will each supervise production of eight pictures. Columbia's production for this year calls for 24 features.

McGuinness and Block will carry the title of associate producers. Previously, both had been in the same capacity at Fox.

English Talkie Set for \$1,300

A. E. MORRISON & Sons, Ltd., of Leicester, announce a new talking picture set to sell for \$1,300 cash, or \$10 a week. It is for theatres seating up to 500. No batteries are used.

Stahl With Universal

JOHN Stahl will go on a new setup with Universal after the completion of "Back Street."

His present contract calling for a set number of pictures closes at that time. New arrangement will have the director on a straight salary basis for a year with options.

Battechlor Back

GEORGE BATTECHLOR, producer of Chesterfield Features, is back in Hollywood and starts another feature this month. Richard Thorpe is to direct. Buddy Shyer is to be the assistant. The company may work at Universal or the Tec-Art Studios, it hasn't been settled as yet.

Vice-President Curtis Hollywood Guest

CHARLES CURTIS, vice-president of the United States, has accepted the invitation of Louis B. Mayer and M. C. Levee to attend the dinner of The Academy of Motion Picture Arts and Sciences at the Ambassador, November 10.

This visit will be the first that the vice-president has made California since he was elected. The Academy and the entire motion picture industry feel signally honored.

The Academy expects this banquet to be unprecedented in motion picture history.

Mayer Returns

LOUIS B. MAYER is back at MGM following an eastern trip. As well as conducting business at the home office in New York the executive visited President Hoover in behalf of Governor Rolph and the Olympic games committee.

Frank Mastroly Named Assistant To Laemmle

FRANK MASTROLY, for four years assistant export manager of Universal, has been promoted to assistant to Carl Laemmle. Jack Ross continues as Laemmle's secretary, but Mastroly will be with the Universal chief at all times both in New York and on the coast.

New 'Music Master' Series Planned By FitzPatrick

JAMES A. FITZPATRICK, who recently returned from a tour through England and Ireland, is planning a new series of six one-reel "Music Masters." Production will start shortly in Hollywood. These will be the first sound Music Masters made by FitzPatrick. Eighteen silent reels of the series are now being distributed independently. MGM may distribute the new series.

According to FitzPatrick, film taken on his recent trip will make up five Traveltalks yet to be delivered to MGM on the 1931-32 schedule of thirteen. MGM holds an option on a second series for next season.

What's What in Make-Up

The Proper Application of Make-Up

SINCE make-up is such an important part of picture making, either professional or amateur, the following directions for the proper application of make-up are presented. These rules have been prepared by Max Factor, internationally known make-up expert, and should be of untold value to any amateurs who are planning to enter a picture in the \$1000.00 Amateur motion picture contest now being conducted by this magazine.

1. **Preparing the Face**—The face must be thoroughly clean before make-up is applied. The best way is to wash the face with soap and water. Men should be smoothly shaven.

2. **Base for Grease Paint**—It is often necessary to use cold cream before applying grease paint. In my laboratory, however, we have developed a grease paint which eliminates this need.

3. **Grease Paint Application**—Squeeze about one-quarter of an inch of grease paint from the tube into the palm of the hand. Then with the tips of the fingers of the other hand apply the grease paint in "dibs and dabs," covering the face with little dots of grease paint until it acquires the appearance of a freckled face. Grease paint must be applied sparingly, too much will spoil your make-up.

4. **Spreading Grease Paint**—Now remove the grease paint from the hands and dip them into cool water, then with the finger tips moistened with water spread the grease paint over the face, blending it smoothly, evenly and thinly into the skin. The movement of the fingers should be from the center of the face outward. Keep dipping finger tips into water as it is essential to blend the grease paint in order to have a smooth and thin application.

5. **Shadowing the Eyelids**—Apply a thin film of lining color to the eyelids with the finger tips, using a light outward motion, blending it carefully upward and outward toward the eyebrows and the outer edge of the lids. No decided line should be visible. Only in special cases should a shadow be used on the lower lids.

6. **Pencilng Eyes**—Line the upper and lower lids by drawing a fine line with the dermatograph pencil where the eyelashes meet the eyelids. Draw this line outward and extend just a trifle, the smallest fraction of an inch.

7. **Moist Rouge**—Apply the rouge to the lips, being sure to give an application to the inside of the lips, so that when the mouth is open, smiling or talking, the line of the rouge will not be seen.

8. **Important Rule**—It is important to follow the application of the cosmetics in exactly the rotation given. All these cosmetics have an oily base and it is essential that all make-up having an oily consistency should be applied before powder or dry make-up is used.

9. **Applying Face Powder**—Then apply the powder. This must be done with a patting motion. Pat the powder on until it is absorbed by the grease paint. Apply the powder over the lip rouge and eye lining profusely. If there are wrinkles around the eyes, pat over them again, drawing the wrinkles apart.

10. **Removing Surplus Powder**—To give your complexion a smooth and velvet finish it is of vital importance to remove your surplus powder. Brush the entire make-up lightly with a special brush and carefully remove every particle of extra powder.

11. **Lip Effect**—After removing the powder from the lips, moisten them with your tongue. This will result in a fine, natural color and the rouge will stay on without retouching.

12. **Make-Up the Eyebrows**—Either a dermatograph pencil or masque may be used. If a pencil is used, draw short, little hair lines, following the natural shape of the eyebrows and accentuating the shape desired. If masque is used, wet the brush and rub on the cake of masque. Now, with the brush apply the masque lightly to the eyebrow.

13. **Make-Up for Eyelashes**—Men as a rule do not make-up the lashes. Women may use either masque or cosmetic. You can accentuate the lashes effectively with masque, but if you want to give the appearance of beaded eyelashes cosmetic should be used. Place the cosmetic in a small container and hold over a flame until melted. Dip paper liner or orange-wood stick into melted cosmetic and apply to the lashes. For beading apply cosmetic to the tips of lashes repeatedly until they acquire the desired beaded appearance. The bead should hold about two or three lashes.

14. **Completing Face Make-Up**—Smooth out the make-up and rebrush it over very carefully with powder brush.

15. **Liquid Make-Up**—Women should make-up the shoulders, arms and other exposed parts of the body to harmonize with the face make-up. For this purpose liquid make-up is used. Start the application at the neck where the face make-up stops. Apply make-up to the neck, arms and hands. Apply with stroking motion and rub one way only until dry. This make-up is easily removed with soap and water.

16. **Removing Make-Up**—Cold cream will dissolve grease paint make-up. Massage the face well until all the make-up is completely dissolved. Then wipe the face thoroughly. It is advisable to wash the face immediately with warm water and plenty of soap, and then rinse in cold water.

17. **Artificial Eyelashes**—The eyelash adds much beauty and charm to the expression of the face and is a useful and an ornamental feature. To the woman who has been deprived of a natural growth of luxurious hair on the lashes, this may come as an aid of great value. The artificial lash, very simply applied, defies detection, and can be worn on stage, screen or on the street. The lash should be cut to fit the lid from each corner of the eye. Spread a film of spirit gum on the foundation of the lash. Allow to dry for a minute, then press the lash firmly against the eyelid, directly above your own lashes.

Chart Suggesting Correct Shades of Make-Up

The following chart will give you approximately the correct shades for various types. The color scheme of "in-between" types may vary, i. e., a blonde type may have hazel or grey eyes; a brunette may have blue or grey eyes. But ordinarily, a color of both hair and eyes distinguishes the blonde from the brunette as follows:

Blondes: Blonde hair, blue eyes and fair skin.

Brunettes: Dark hair, dark eyes, medium skin.

The colorings of Panchromatic make-up are neutral tones of tan and warm brown. When it is completely applied the effect is a monotone complexion, which is the correct color for the best photographic results, with any type of film stock used.

(Continued on Page 50)

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Here are the Rules and Regulations of the Contest:

- The American Cinematographer will present a prize of \$500.00 for what its judges consider the best 16 millimeter picture submitted in this contest. \$250.00 will be given as second prize; \$150.00 as third prize; and \$100.00 as fourth prize, a total of \$1000.00 in prizes.
- This contest is open ONLY to AMATEURS. No professional cinematographer will be eligible to compete. It is a contest solely for the amateur, either the individual or the club.
- The contest officially opens November 1, 1931. The contest ends at midnight of October 31, 1932. All pictures must be entered by the closing date or they will not be considered. Entries mailed or expressed bearing the date of sending will be accepted if they reach THE AMERICAN CINEMATOGRAPHER office after October 31, 1932, providing the date shows they were sent before midnight of October 31, 1932.
- Pictures submitted in this contest will be judged upon photography, composition, direction, acting, cutting and entertainment value. And only silent pictures will be eligible for the contest. The judges, whose names will be announced later, will include outstanding and widely known Cameramen, Directors, Actors, Writers and a group of nationally known Motion Picture critics from some of the best known newspapers in America.
- The decision of the judges will be absolutely final, and there can be no appeal from their decision. Announcement of the awards will be made as soon after the close of the contest as possible and checks will be mailed the winners.
- Pictures may be submitted either by individual amateur movie makers, or they may be submitted by Amateur Movie Clubs. However, they MUST BE photographed on 16 millimeter or 9 millimeter film. Accompanying each entry must be a sworn statement to the effect that no professional cinematographer assisted in the making of the picture. No pictures will be accepted which were photographed on 35 millimeter film and then reduced to 16 millimeter.
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Amateur Movie Making

by WILLIAM STULL, A. S. C.

THE ANNOUNCEMENT of the **American Cinematographer** Amateur Film Competition last month had, for the discerning, far greater significance than could be read in the lines of type informing the world of the rules and prizes. It represented the first tangible recognition by the professional cinematographers of their non-professional fellows. For behind this contest is the American Society of Cinematographers, a world-wide organization composed of the outstanding professional cinematographers, "the camera-masters of the world," as one distinguished scientist has phrased it. Considering the individual and collective achievements of the members of this body, it is only logical that they should be the ones to first recognize the fact that it is the duty of the professional to encourage amateur cinematography by every means possible. For whether it be true or not that today's amateurs may be tomorrow's professionals, as certain enthusiasts like to state, it is incontestable that today's amateurs—and tomorrow's as well—are the real audience to whom the professional must play, and whose increasing appreciation of cinematography will do more than anything else to aid the professional in his unceasing strife for improvement in things cinematographic. And in view of the exceptional work of such amateurs as Dr. J. S. Watson, Jr., A.S.C., and others, it cannot be gainsaid that many of today's greatest cinematographers are, from choice, numbered among the amateurs. Therefore the sponsors of this contest have initiated it with two thoughts in mind: to aid them in their work of fostering a closer understanding and cooperation between the professional and amateur groups, and to give world-wide recognition to the achievements of the advanced amateur cinematographer.

What It Takes to Win.

The fact that this competition is to be conducted and judged by professionals—not only professional cinematographers, but professional writers, professional directors, professional actors, and professional critics—means that the entries will be judged by the same standards by which professional productions are evaluated by their makers. What are these standards?

I think that they may be summed up by the single word "finish." That is the quality that most clearly distinguishes the work of the professional in any line from that of most non-professionals—that intangible completeness and coherence that is the result of careful planning and painstaking execution. But while it is more frequently characteristic of professional efforts than of amateur ones, it does not by any means follow that it is not, or cannot, be found in non-professional work. It is a fact, however, that too many amateurs overlook the importance of this feature, and allow themselves to fall short—not of perfection—but of the nearest approach thereto that is possible under the conditions of the moment. They are too willing to condone lapses, whereas the professional realizes that no excuses are ever possible—that his sole advocate is what appears on the screen.

Entrants in this contest must first of all adopt this attitude in work intended for the competition. Since the pictures are to be judged by an impartial board of judges, you cannot expect them to make the allowances that you and (if you are lucky), your friends would make if you were showing the film in your home or your club. You may see a scene with your mind's eye, as well as with your physical eyes, and so understand just why it falls below par in this particular or that; they see it

only with their fore eyes, and appraise it solely by the evidence you have provided them on the screen. If you have not given them a finished production to judge, they can only adjudge it for what it is, without inquiring why it is such.

What is "Finish?"

We have said a good deal about "finish," and its importance; but what does it actually consist of? Not perfection, but a conscious striving after perfection in every detail; completeness—and coherence of purpose; economy of effort. It is probably best understood by those of us who have attended "amateur try-out" nights in a vaudeville house. The professional acts on the regular bill—no matter how poor they might be—had something that differentiated them from all but the best of the amateur ones which followed. That something was "finish." The professional was able to put over his point with a minimum of effort, whereas the amateur generally worked hard to do it—too hard, in fact, for he strove so mightily that it became painfully obvious, and the audience lost sight of his point in the mechanical effort by which he strove to put it across. Then, if something went wrong and the trouper "got the bird," the professional would either ignore it, or turn it to his advantage, whereas the amateur would falter, stop, or at least continue in a sullen way that antagonized his audience. Lastly, the professional "turn" seldom showed any ragged edges, whereas the amateur one almost invariably did: this was not because one was professional and the other wasn't, but because the former had rehearsed and rehearsed his act looking for those ragged edges, and trimmed them off smooth before allowing anyone to see it.

In a motion picture, "finish" is much the same: an absence of any intimation of the mechanical; economy of effort; and, most of all, completeness of detail. In the story, it means strict attention and adherence to narrative requirements. A good plot, logically developed: every character, location and motivating factor adequately "planted," yet without dwelling unduly on this process; absence of all extraneous factors; and the whole smoothly and—if possible—originally carried along to a logical and naturally dramatic **denouement**. In direction it means first and foremost an understanding of tempo, plus naturalness. In acting, it means proper timing, and economy of effort. In photography, it means the use of the camera not as an end in itself, but as a means to an end—the story; proper sequence of camera-angles; proper matching of the visual quality of the scenes and the mood of the story; and uniformity of photographic quality throughout. In cutting, it means again the understanding of tempo, of photography, and of story construction. In titling, it means adherence to the story: dramatic feeling, brevity, and a complete absence of "fine writing." Summed up for the entire production, it means not an ambitious thing incompletely accomplished, but a definite idea—simple or otherwise as the individual's ability may dictate—completely and efficiently realized, without slight to any detail whatsoever. Far better a simple thought carried through to completion with certitude than an ambitious one badly and incompletely executed.

From the foregoing, it might be inferred that only dramatic films will be considered in the competition. This is by no means the case: a well executed travelogue, abstract cinema, or documentary film will have an equal chance; but it is almost inevitable that the dramatic productions will be in the

(Continued on Page 46)

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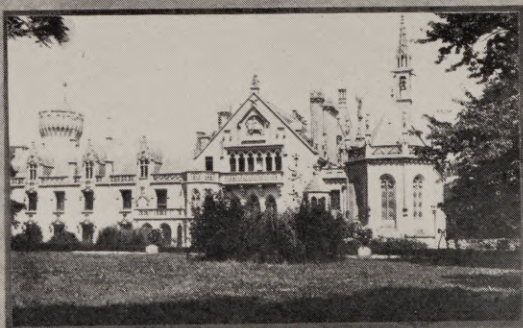
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1. Beggars at Church Door. 2. Concarneau at Low Tide. 3. Main Door at Chateau de Keriolet. 4. Louise, Maid at Le Faouet. 5. Concarneau Chatterboxes. 6. Marie at Lorient. 8. Chateau de Keriolet. 7. and 9. Figures in Grounds of Chateau.

Babbling About Brittany

by LAWRENCE GRANT

This is the eighth article of an unusually interesting series which Mr. Grant has written for this magazine. The concluding article will appear in the Decembr issue.—Editor's Note.

DO NOT know why it is, but French people, especially those in small towns and villages give the idea of restless energy and bustle, and this is something quite different from our own rush and hurry, for the former is done without apparent effort, while the latter is wearing on the nerves, the health and the temper. But these Gallic persons always seem to be "going places." In family groups, in scattered twos and threes or in small crowds. Children going to school, women going to market, soldiers going on duty, merchants going to business, local magnates going to a meeting. They are all going somewhere and they are intent on arriving.

They have reduced the art of working hard and playing easily to a science. They will work like mad from early morning in their stores and offices. Sharp at noon they will close up. Off they go to their favorite restaurant or their homes. They will sit outside the restaurant if the weather permits, possibly they will be met by their wives and children, and for two hours they will eat and be as gay as though nothing in the whole world had to be done and nothing ever was going to be done again. Sharp at two, or a few minutes before, they are gone. Store doors are opened, and they are there again so concentrated on their jobs that it would seem to you that such a thing as two hours of leisure was, to them, unthinkable.

In fact the difference between French, English and American people on this point is interesting, and as one who has lived in and liked each country and each peoples it seems to me that the American spends too much time with, and in, his business, works too hard at it, takes it home with him, never forgets it, lets it dominate him, and devotes altogether too little time to his recreations, and even when he is recreating is apt not to forget it; the Englishman spends too much time away from his business, doesn't work hard enough at it when he is there, forgets it when he leaves, and makes his week ends last too long; while the Frenchman works from early hours like a dog, concentrates and forgets pleasure when he is at business, then shuts it all off completely and plays like a child with as much earnestness as he gave his work during working hours. But he does not confuse the two, he has solved the problem of work while you work but do not overdo it, and play while you play but not all the time.

Don't waste anything. Time, Food, Money, Energy. Conserve everything, use everything. Remember it was a Frenchman who first made a fortune from the garbage can by collecting old sardine boxes and stamping out tin toy soldiers from them, painting them in the uniform of different countries and regiments and so started the great toy soldier industry.

And—there is no unemployment in France.

Concarneau is the nearest rival to Douarnenez as a sardine port, and is described by dear old friend "Joanne," as:—"sale et relents nauseabond, mais qui attire un grand nombre de tourists et d'artistes par son aspect pittoreque." For those whose knowledge of French is only of the working variety I may say that "relents nauseabond" means a musty smell of the most nauseating character.

I think this description a little unkind. It is rather smelly but I would hardly say it nauseated one, and as I said somewhere else it is unfortunate but true that "pittoreque" is frequently synonymous with "sale."

And after all think of our ancestors of not so long ago, just about Washington's date and a little earlier, when the last word in fashion was powdered hair, and lovely ladies who look so pure and sweet in their portraits had their hair fixed and slept with it so for days, and did not take it down till it was inhabited by things, even, as the story goes in one case, till a mouse had a family there!

So let us open our eyes and close our nostrils. Then Concarneau will be lovely, with the only fault, just a little too much of the "grand nombre de tourists et d'artistes"; for truth to tell just a shade too many English and American to my taste there. When I travel I like to be the only alien, the only nuisance, the only blot on the local beauty, and I resent the presence of another traveller. I like "Brittany for the Bretons" with just an exception in my favor.

The harbor and the old town have more interest and charm than Douarnenez, with about as many sardine boats, but frequently the sardines leave the locality, and then the distress among the fishers, who are not so thrifty, is rather severe, though again I do not think "Joanne" has a right to state that they live in drunkenness.

However tourists do not live in the old walled in town, they live in the good hotels in the outer part, so they are spared both the "nauseabond" and the "ivrognerie" unless they wish to visit the enclosed and interesting old city. They can stay and exchange banalities with their own kind in select comfort, or go and have an interesting time with the natives. One dull, the other dirty. It's a matter of choice.

Looking at that little picture by the side of the boats at low tide in the harbor I am reminded of one of the scourges and real nuisances of France and most of Latin Europe. The professional beggar. The maimed men living on charity, and exposing the most horrid complaints and the most revolting deformities as "Exhibit A" with which to enlist your sympathy.

Some of the most annoying will thrust an unsavory arm stump right in your face and almost hold you up for some sous or better. They have their stands, and outside nearly every church you will find them, they carry a certificate from the Mayor or someone licensing them to do this. They are so importunate and so depressing. Some of them sing, or intone, their whole life story, which would appear to have been one long succession of gruesome misfortunes. They are unfortunate and one must feel sorry for them, but one would like to think the authorities could find a better way to take care of them.

Of course we have them here, for I remember one in New York who had a certain spot where he was to be found every day, but when some fuss occurred with him, it was disclosed that he came to his stamping ground in a splendid car, which he left at some distance, and had a bank account to be envied. There is a man down town in Los Angeles, who, I am credibly informed, owns a block or so of property.

Not far from here is the Chateau of Kerioulet, and I cannot refrain from showing more than one picture of this example of bizarre taste. It is of modern construction in imitation of the times of Louis XIIIth and is covered with bad ornaments and the grounds full of bad statues, mostly of a religious subject. It is a pretty sad spectacle, though its imposing appearance awes many tourists into the belief that it is splendid. It was bequeathed to the State by the Countess Chauveau-Narischkine and she left it full of lovely works of art, so inside is better than outside. Originally it was a rather good example of Renaissance, but unfortunately the lady when left a widow married again, a man who had never possessed money or taste before he met her. He got control of her money but not her

taste and renovated the chateau, and as the old caretaker said to me shrugging his shoulders, "Monsieur renovated a perfectly good ruin, and ruined it".

Turning attention from the women who "run" the hotels in Brittany to the girls who serve in them, here we have two charming examples, Josephine, who was second lieutenant to Couillard at Le Faouet, and Marie from Lorient. These are the girls who are graduating, learning the ways to manage things, and will succeed the present chatelaines when due time comes, and from the way they look after you it seems that the reputation of their predecessors will lose nothing in their hands. Unless the rush of modern tourist travel with automobiles which enable people to see the world who years ago would get no further than a neighboring seaside place in their own country spoils everything. In the past, "avant la guerre," as they will "date" things, those who made such pilgrimages were the wealthy leisured educated classes who took trains and drove in leisurely way through a country, people who had servants of their own, knew what it was to enjoy service and attention, and how to expect and command it. Thus was the spirit of these places and these people kept. With the coming of automobiles and nouveaux riches this is all in danger, for instead of encountering dignified contact, these hotel women and girls are now treated in many cases to either haughty domineering, over intimate friendship, or undesired "freshness" from the cheaper male members of the party. In time the service will adjust itself to the level of those served. Which is a pity. But it is inevitable. Even today look at the negro in the South and compare him with the same type in New York.

Automobiles have done lots of things like that. I can remember when the first automobiles began to run about the country lanes, and gay sparks thought it was the thing to run a Gaiety girl down to Brighton and back, and some wit referred to the "dear old lanes of England, reeking of petrol and patchouli". The first picturesque thing to disappear was the village forge, no longer "under the spreading chestnut tree, the village smithy stands." At first the blacksmiths, poor souls, tried to stem the tide by pretending to mend stalled autos, but alas that frequently turned a stall into a wreck. So they had to go, and their place is taken by service stations, generally ugly, and with no old world flavor at all; then too many of old time inns became modern roadhouses, and the quiet contemplation of Ann Hathaway's cottage, for instance, now takes on all the atmosphere of an international Rotarian meet.

And as machinery comes in, manners go out. No time for curtsies and courtesies. Get in and get on.

And knitting, as the two old ladies are in the lower row, and spinning with a "rouet a filer" as the little old soul is in the upper row, and weaving as is done all over Brittany will pass along with everything else. Mr. Gandhi may preserve it in India, though I doubt it, for when they get their independence, and can buy cheaply what they spend hours making, young India will buy. He may halt the British nation but he cannot stem human nature.

The little old spinner I had difficulty in finding, but when I succeeded she was worth it. She lived all alone, was just as sweet and clean as she looks. She is not "dolloed up" for her picture, I came in on her unexpectedly. Her cottage had no floor but Mother Earth trodden very hard and kept spotlessly clean. Her wonderful though small collection of lovely linen was in orderly row on shelves, her furniture, including her carved Brittany bed polished to the last shine. And she could not and never had spoken one word of French. She was Breton to the backbone, and regarded French people as rather odd mannered foreigners.

She had a grandson who she assured me had gone to Berlin, but as he had not told her where he was going to stay she had not been able to write to him!

The limitation of family so associated with the richer and middle class French does not extend much to peasants and

fisher folk. They have children and are proud of them. I met one youngish woman, that is she was about thirty-five, mother of thirteen children, whose husband was at the war, and I said to her:—"What will you do when he comes back?" She replied in a roar of laughter:—"Start in and have thirteen more as a thank offering!"

I met another woman who had four sons at the war, and her husband. She was careworn and sad for three sons had been killed. She had received the fatal telegram which came to all mothers who had lost sons. Yet she was praying God if she must lose one more, that it be her son, just so that "He" was spared and returned to her.

Look at them on this page opposite. Old women; chattering women with their children; and a young woman with her first baby whom the Father at war had never seen. They are wonderful. No wonder when the country is referred to by name the feminine pronoun is used:—"Vive LA France" for the women are most astonishing part of this adorable country.

This woman had a letter from her husband which said among other things, that:—"I enclose you twenty-five francs which you may be glad to get". There was no twenty-five francs. But there was a Post script, and it said:—"As a man called a censor will open this letter as it goes to you, I thought it better not to enclose the twenty-five francs".

Auray, of which we have two streets and two views, is the getting off place for Belle-ile-en-mere, the island on which Sarah Bernhardt had a wild rocky home to which she could retreat from the rush of Paris life, is a most picturesque place, though generally visitors only go there on the way to the great and famous Pardon of St. Anne D'Auray, and if you stayed at the hotel Grand Hotel du Lion d'Or et de la Poste at just the right moment you would encounter the "Divine Sarah" staying with her friend the patronne over night, on her way to Belle-ile.

When the train first came to Auray the inhabitants thought it would be noisy and a detriment to the little town if it came in too close, so the station is away out of town, and you take quite a little ride in a rickety bus before you rest in your hotel. Now of course they realize their error, but too late to repair it.

300 Watt "No Resistance" Lamps for Victor

VICTOR ANIMATOGRAPH CORPORATION, Davenport, Iowa, announces that a new G-E Mazda Projection Lamp of 300 Watts rating which does not require any form of lamp resistance is now available for use in all Model 3 and 5 Victor Projectors and Animatophones.

The Lamp may be obtained in voltages of 105, 110 and 115.

Initial tests indicate that this new 300 Watt lamp may closely approach in intensity of illumination some of the highly efficient low voltage lamps which employ rheostats or transformers to reduce the line voltage to that of the lamp rating.

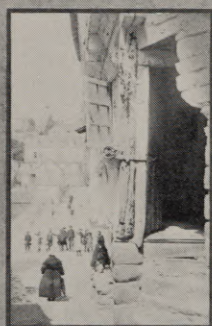
It is even believed that it may fully equal and possibly excel the lamps employing transformer resistance. Tests to date, however, show that it is not quite equal to the 165 watt-30 volt lamp or the 375 watt-75 volt which are used with the VICTOR variable resistance rheostat.

This new 300 watt lamp is of the regular 16 mm. T-10 Size and is equipped with the bayonet type prefocused base.

It may be obtained from Victor dealers or direct from the Victor factory at Davenport, Iowa.

Sound Apparatus at \$375

COMPLETE sound equipment for two projectors is to be offered in England at \$375, the lowest price at which sound equipment has ever been sold there. It will be offered by Eugen Forbat & Co. of Vienna which has sold 800 of these sets in Germany. The price was recently reduced from \$500.



1., 2. and 3. Quimperle. 4. and 6. Streets in Auray. 5. Boutiques at St. Anne d'Auray. 7. Door of an Estaminet. 8. Pardon Procession of Notre Dame de la Clarte, Baud. 9. Door of a Church at Baud.

16 mm. in the Air

by **WALLACE BEERY**

AVIATION has reached the point where every one of us has plenty of opportunities to fly. Many of us either pilot our own planes, or have friends who do—and all of us can at least fly in the safe, comfortable machines daily plying the airways of the world. Flying is no longer dangerous nor expensive; but it still is, and, I believe, always will be, the greatest sport in the world. And to the users of amateur movie cameras it is also an invariably interesting subject, for no other subject offers such unusual opportunities in either the making or the showing.

Unfortunately, however, far too many of us have overlooked the possibilities that aviation offers our Filmos, or, if we have not overlooked them, we have ignored them through the mistaken idea that aerial cinematography was something excessively difficult, and requiring specialized knowledge and equipment available only to professional cameramen. This is not the case at all: the ordinary Filmo or Cine Kodak, plus just a little intelligent operation, will make aerial shots that quite equal those made by all but such rare professionals as Harry Perry or Elmer Dyer. In other words, amateurs such as you and I can easily do just as well with our cameras in the air as we can on the ground, and sometimes better.

The exact methods that should be used differ, naturally, under different conditions. Probably the most important factor is the type of airplane used. In an open-cockpit machine, you have things to contend with that you don't meet in a closed one, while in a commercial airliner conditions are still different. In either case, however, the actual operation of the camera is much the same.

The first thing to be remembered is to always use panchromatic film. Either the negative or the reversal type may be used, and any brand will do so long as you are accustomed to using it. I have found, in my own work, that the regular "pan" is far better than the newer supersensitive types, for generally speaking, you are not going to need either the extreme speed nor the improved color-sensitivity of the new film. In the air, as you climb higher and higher, you will find it necessary to reduce your exposure just as you do when you are working in the mountains. Furthermore, if you are attempting to photograph other planes, you will be getting much more of the intense blue sky in your picture than you do in the ordinary ground shot, so you will have to allow for this in your exposure, too. Naturally, this increase in the blue demands the use of a color filter; no one filter will give the best results under all conditions, though the K-2 is about as good for all-around use as most of us could ask for. If we are particular, however, we should use an Aero No. 1 for shots of things on the ground, as this filter was developed especially for the purpose of cutting out the bluish haze that generally obscures things from above; for scenes of cloud-formations, or other planes, either the K-2 or the K-3 should be used, depending, of course, upon the exact effect that we want to get: if we want the dark skies and sharply-defined clouds, etc., that we see in films such as "Hell's Angels", the heavier K-3 is the filter to use.

The best lens for most aerial work is the ordinary one-inch lens with which most cameras come equipped. An f:3.5 lens is quite fast enough, for most aerial scenes will be made at stops smaller than f:11 (unless a filter is used.) A universal-focus, or fixed-focus lens is quite an advantage, for this sort of thing is always, or nearly always, shot at the infinity focus anyway—and if your lens is rigidly fixed at that point, you can forget the matter of focus, and concentrate on the other more important matters. Once in a long while a telephoto lens may be useful;

but in most cases anything bigger than a two-inch lens is of little value. If you are shooting toward the ground, your telephoto lens will bring things too close, and not only lose the effect you want, but very likely give you a blurred picture, because of the plane's high speed. Besides, it will magnify the slightest movement of either the plane or the camera, and give you a jerky, unpleasant picture that is worthless. The same holds true if you are photographing other ships in the air, and here there is the added disadvantage of the difficulty you will find in locating your subject through the finder, especially the multiple-masking types used on some of the newer cameras.

In the actual photographing, the most important point is to hold the camera firmly in your hands without trying to brace it on any part of the plane. For if you try to brace it on the plane, you will find that the vibration of the engine will be passed on to the camera, and the result will be a jumpy, blurring picture. Another important thing is to hold the camera steady: don't try to pan around—let the plane do that. This is particularly important if you are trying to photograph several other planes in the air near you, as in military formations, etc. If you find that you cannot include all of them in your picture at once, make up your mind which you want to have in your picture, and then keep your camera trained on them, without any attempts to swing over to the others.

If you are flying in an open-cockpit plane, use the rear cockpit if you possibly can. If you have an experienced pilot, he can fly the plane quite as well from the front as from the rear—and if he isn't experienced, you have no business to be flying with him. In a flying-boat, on the other hand, the forward cockpit often gives you the best range of view. In any open plane, however, it is vitally important to be sure that you have an adequately large windshield in front of you, for the slipstream—the hundred-mile-an-hour blast from the propeller—will otherwise whip the camera around in spite of all that you can do, and spoil your picture, if it doesn't blow the camera entirely away from you. Even with a good big windshield you will find it necessary to keep well down, and to be sure that every bit of the camera is well within its protection. Even a small part projecting into the slipstream is enough to give you a shaky picture.

In a closed or cabin machine, of course, you don't have this to contend with. On the other hand, in some cabin types you will find yourself confronted with windows of tinted shatter-proof glass which can't be opened. In that case, you will be forced to do various things to partially offset the disadvantage: if the window is merely the poorer type of unbreakable glass, with yellowish, wavy celluloid imperfectly bonded between two sheets of ordinary glass, you will simply have to hunt about until you can find a place that will present the fewest of these flaws; if the glass is of good quality, but merely tinted for the comfort of the passengers, you will have to make allowance for it in the exposure and filtering. In most of the better types of private cabin planes, however—such ships as my own Travel Air, for instance—the windows are of the finest quality shatter-proof plate glass, and, moreover, some or all of them may be opened. At the very least, those beside the pilot's seats will open, giving you a clear shot from straight sideways to at least $\frac{3}{4}$ forward—and sometimes even straight forward. In that event, of course, your work is very simple: simply arrange to sit up there beside the pilot, open the window at the proper time, and shoot. I have often managed to shoot scenes this way when I was flying myself: if I had no companion to whom I could pass the controls for the moment, I would level

(Continued on Page 42)

The Amateur Professional

by **JOHN C. FARDON**

Basic Science Laboratory, University of Cincinnati

SINCE the glorified professional often enters the realm of the amateur, the author deems it no less justifiable for the lowly amateur to mimic the professional method. Though there is a difference of 19 and even 64 precious millimeters (to say nothing of temperamental performers and carpenters) between the professional and the amateur, much can be done with amateur equipment. With a little application and serious thought the author has advanced from the cinematography of "cute babies" (in arms) to the lap-dissolve, multiple exposure, micro-cinematics, miniature sets, make-up, matte-box with effect mattes and filters, and the follow-up shot. And last but not least, several productions have been made, in spite of the fact that the scenario was not strictly followed during the heat of the dramatic business. But since this is all commonplace knowledge to the professional, we shall get down to a little technical material which may prove to be of some interest to the "professional amateur".

The author's pride and bromide burner is the slightly modified Bell & Howell 70-D-A camera with the additional film reverse mechanism. The other added fixtures are:—the adjustable matte-box, camera track for centering the field for close-ups, auxiliary view finder, and the automatic dissolve disc. In Figure 1 we see a close-up of the camera that was once portable but is now only movable. As a result of the professional embellishments the camera and tripod were mounted on a stand with rollers, as shown in Figure 2, thus making possible the follow-up shot. Referring again to Figure 1, we see, directly behind the matte-box, the dissolve disc which is

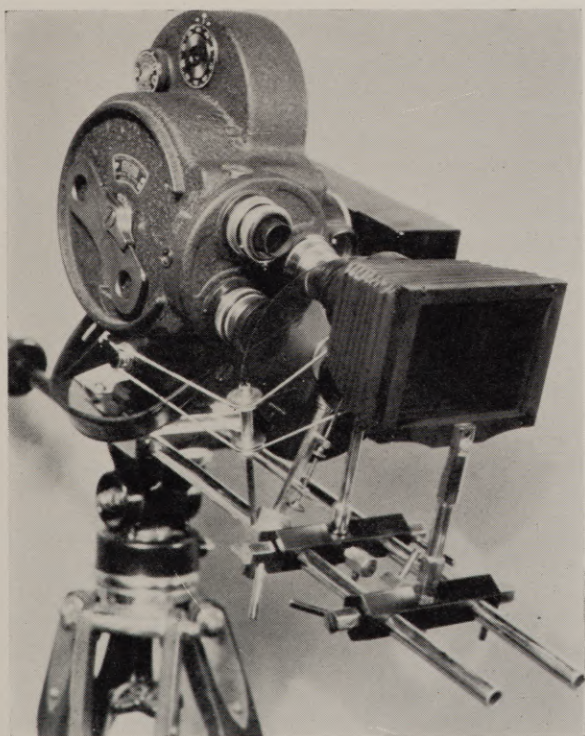


Fig. 1



Fig. 2

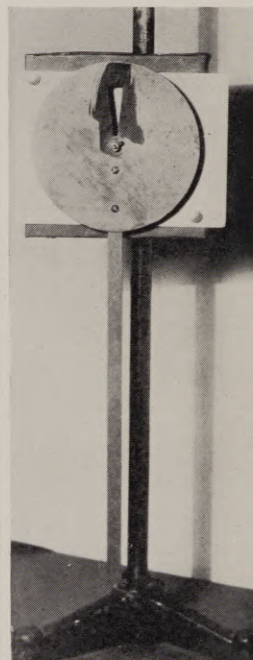


Fig. 3

supported by an adjustable upright. A flexible steel cable transmits the power of the spring drive motor to the celluloid disc. The ratio of the driving pulley to the driven pulley on the disc is such as to allow one foot of film to pass for a fade-out or lap-dissolve. A stop and spring release lever on the disc is such as to allow one foot of film to pass for a dissolve the release lever is depressed, thus setting the disc in motion. After a half revolution the disc automatically stops and the operator releases the camera button. With the aid of the reversing mechanism the film is backed up a little over one foot (about three turns of the crank). Then the camera control button and disc release lever are operated simultaneously, thus effecting a fade-in to complete the lap-dissolve.

As for the disc proper, it was made from a 5x7 process film cut in a circle of four inch diameter. After numerous attempts at making a circular optical wedge by various procedures, the author finally came upon a method which produced remarkable results. A simple bar pendulum of about sixteen inches in length with a metal disc of six inch diameter fastened to the pendulum was mounted as shown in Figure 3. The center of the disc is directly in line with the fulcrum of the pendulum. A small sector was cut out of the disc in order to permit light to pass through and impinge upon the film, which was mounted on a square board directly behind the disc. In order to produce the variable density upon the film, the apparatus was set up in a dark-room, with a 10 watt lamp placed about seven feet from the disc. The pendulum was then set in motion and the lamp turned on. As the oscillations of the pendulum decreased to zero, the lamp was switched off and

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A Standard Aperture

(Continued from Page 14)

only as a makeshift, for the cameramen have had to fill about twenty per cent of their frame area with non-vital action or unessential views of the set.

To rectify this condition, the A.S.C., the Academy, and the various other interested groups have cooperated in devising a new aperture. This new aperture restores the desirable 3 x 4 rectangle, and is to be used for all purposes including the now rare disc and silent versions. As the diagram shows, it provides for a projection aperture slightly smaller than the camera-aperture. The dimensions of the photographing aperture are .651" x .868". The dimensions of the projection aperture are .615" x .820". These standards have been officially recommended by the various agencies involved in their development, and will soon have been standardized by all of the major producing and exhibiting firms, which will, naturally, compel the smaller independents in both fields to follow suit. Although the new standard has been announced only a short time, it has already been adopted by the Metro-Goldwyn-Mayer studio and is in use on all of the productions now in work at that plant. The Paramount Studio is also adopting the new aperture, and a majority of the other major firms are either preparing to make a similar change or seriously considering doing so. A full report of the proposal has been forwarded to all studio executives by Lester Cowan, Executive Secretary of the Academy. The studios have been asked to make their decision by November first. The proposal will next be referred to the principal theatre chains, and thereafter a definite date will be set after which all productions will be photographed with the new aperture.

Its adoption will be of far reaching benefit. The first to feel it will naturally be the cameramen, who will no longer be forced to compose simultaneously for a variety of apertures and proportions. The other production departments will, in consequence, be benefited. The design, construction, and lighting of sets will be vastly simplified. The tops of large sets can be lowered by as much as five feet, and all sets can be reduced in width by nearly ten per cent without making any change in the placing of the essential action and props as photographed for the past year. Scaffold lights can be lowered from three to five feet, thus making possible either a reduction in wattage or the use of fewer units. Microphones can be lowered from three to five feet, resulting in an obvious advantage in sound quality and convenience for the sound department.

The studios will be assured that their pictures will be projected exactly as photographed. The exhibitors will be able to standardize their projection equipment with the assurance that they will be able to play the product of any producer without danger of bad projection due to misframing and conflicting apertures. And the public will get the best visual quality that the producers and exhibitors can give it, combined with the soothing psychological effects of the easy-to-look-at 3 x 4 rectangular picture. In a word, we have taken another step in our return to the photographic normal.

Milestone Plans Off

Lewis Milestone and David Selznick, who planned to produce for Radio release, have dropped their plans, it is reported. Selznick may go to Radio as executive and Milestone will probably return to the Howard Hughes organization.

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Making Miniatures

(Continued from Page 10)

phenomenon. Many times I have seen miniature scenes which, in the first few-score feet, while the camera was gathering speed, looked sharp and "miniatury", suddenly soften out and become natural as the camera reached the proper operating-speed.

The successful miniature-photographer must also be familiar with all of the various special photographic processes. By means of such processes as the Dunning or Williams' processes, or by the use of projected action he can combine the miniature with previously photographed action or backgrounds and so add realism through the addition of people or other natural action. Optical printing also is an invaluable aid, as it enables us to combine any number of separate shots into one complete one. By this method we can often advantageously use miniatures to supply foreground or background action in normal scenes made in the stage or on location.

Therefore it can be seen that the secret of success in miniature work—if so obvious a fact can rightly be called a secret—is intelligent and experienced design, painstaking and artistic construction, and thorough cooperation between the designer and photographer in the ultimate process of photographing the miniature. The ultimate goal is perfection, not as an artful model in itself, but as a means toward making a completely realistic shot more efficiently, and with less expenditure of time and money, and less danger to human life, than would be involved in doing the same thing in actuality. It is not a question of fooling the public, but one of giving them a better show for their money by taking advantage of this method, which simplifies the difficult, and makes the impossible possible.

Mr. Jahraus is one of the best-known and most experienced miniature technicians of the industry, having specialized in this work for nearly twenty years. He has the distinction of having made the first miniature used in motion pictures.—H. H.

16 mm. In The Air

(Continued from Page 40)

the ship with the adjustable stabilizer, take my hands off the wheel, and shoot my scenes while the ship flew itself—as most modern ships will under normal conditions.

The forward position, beside the pilot, is generally the best camera position in private, single-motored cabin planes. In commercial airliners, of course, whether single-motored or otherwise, this position is out of the question for most of us: so the next best is the extreme rear seat—especially in trimotored machines, where you would otherwise get a picture only of the engine-nacelle, landing-gear, and wing-bracing. The windows in these machines are generally of excellent glass, and quite easy to photograph through even though you can't often open them. The pilots on most air-lines are very accommodating fellows, and will be glad to help you to get good pictures of interesting scenes on the run if you will only ask them to before you start. I have often known them to go several miles out of their way in order to circle some particular place that a passenger had wanted to see, and to drop down to an altitude of 1000 feet or less—ideal for photographing—in order to give the passenger the best possible break.

As a rule, I think that the best results will be obtained if you have flown once or twice at least before trying to use your camera: then you know what to expect—how things look from the air—and you can concentrate on your camerawork without thinking of the novelty of flying.

Granted a good pilot and a modern airplane, flying is safe. It is also a wonderful sport in itself; and since it gives us not only a chance at rare sport in making the pictures, but pictures that are in themselves interesting, not alone to ourselves, but to everyone else, none of us should neglect a chance to take our cameras a-flying with us.

Hollywood Callboard

As this issue goes to press the following production activities were under way in the Hollywood Studios.

| STUDIO | STAR | DIRECTOR | ASST. DIR. | CAMERAMAN | STORY | SCENARIST |
|------------------------|---|--|---|---|---|---|
| COLUMBIA | Jean Harlow Jack Holt Barbara Stanwyck Buck Jones | Wm. Beaudine Edw. Sedgwick Frank Capra L. Hillyer | Jean Anderson Dave Selman Buddy Coleman Mack Wright | Teddy Tetzlaff Con O'Connell Archie Stout | "Blonde Baby" "Yellow" "Forbidden" "Justice Rides Again" | Robt. Riskin H. J. Green Uncredited L. Hillyer |
| CARR STUDIO | Bob Steele | Bert Glennon | Paul Malvern | Archie Stout | "Law of the West" | Bert Glennon |
| DARMOUR | Mickey McGuire | J. A. Duffy | Wesley Morton | Jim Brown | "Mickey's Peace Conference" | Uncredited |
| FOX | Farrell-Gaynor | David Butler | Ad Schaumer | E. Palmer | "Delicious" | Bolton-Levine |
| INTERNATIONAL STUDIO | Action—All-Star Fanchon Royer Big 4-King-All Star Fenix Prod.-Bohr | Frank Strayer Wallace Fox Unassigned Geo. Crone | Art Black Alfred Benham Wm. Nulte Art Black | Jules Cronjager Ernie Miller Eddie Kull Harry Jackson | "Flop House" "Gangway" "Dance Hall Kisses" "Hollywood, City of Dreams" | Betty Burbridge Bern. McConville J. P. Reed Mig. de Zarrayhia |
| METRO-GOLDWYN-MAYER | Greta Garbo Marie Dressler Shearer- Montgomery | Geo. Fitzmaurice Clarence Brown Sidney Franklin | H. Tate Chas. Dorien Harry Bouquet | Wm. Daniels Oliver Marsh Ray Binger | "Mata Hari" "Emma" "Private Lives" | Uncredited Vicki Baum Krabby-Shyer-West |
| PARAMOUNT | Dietrich-Brook- Wong Cooper-Coogan Sidney-Raymond Chatterton-Lukas- Ames All-Star All-Star Boyd-Francis-Tearl | Josef von Sternberg Norman Taurog Marion Gering Richard Wallace Dorothy Arzner Ernst Lubitsch Stuart Walker | Ned Marin A. Jacobson Geo. Yohalem Sidney Brod Wm. Kaplan Geo. Hippard Jack Mintz | Lee Garmes Arthur Todd David Abel Chas. Lang H. Fischbeck Victor Milner Henry Sharp | "Shanghai Express" "Sooky" "Ladies of the Big House" "Tomorrow and Tomorrow" "Working Girls" "The Man I Killed" "The False Madonna" | Jules Furthman Jones-McNutt L. Weitzenkorn Josephine Lovett Zoe Akins Vajda-Raphaelson Kober-Harris |
| R.K.O.-PATHE | Helen Twelve- trees | Ralph Murphy | Robert Ross | Arthur Miller | "The Second Shot" | Garret Fort |
| RADIO PICTURES | Dolores Del Rio Astor-Cortez | Herbert Brenon Geo. Archain- baud | Ray Lissner Tommy Atkins | Nick Musuraca Leo Tover | "The Dove" Untitled | Stevens-Meehan Louis Stevens |
| TEC-ART | B. F. Zeidman Prod. Patrician Pictures Supreme Features Mascot Pictures | Howard Higgin Alan Crosland J. P. McCarthy Watson-Schaefer | Clem Beau- champ Geo. Bertholon Harry Christ Webster-Tyler | Al Seigler Bob Plank Frank Kesson Ben Kline | "Juvenile Court" "Thirty Days" "Cavalier of the West" "The Lightning Warrior" | P. Gangelin Hal Conklin J. P. McCarthy Gittens-Beebe |
| TIFFANY PRODUCTIONS | Wallace Ford Maynard-Hiatt | Erle C. Kenton Breezy Eason | Doc Joos Mike Eason | Gill Warrington Arthur Reed | "X Marks the Spot" "Sunset Trails" | Florence Ryerson Ben Cohn |
| UNIVERSAL CITY | Bela Lugosi Summerville-Pitts | Robert Florey T. Freeland | Scotty Beal Alfred Stearn | Karl Freund Jerry Ash | "Murders in Rue Morgue" "Pudge" | Florey-Van Avery Uncredited |
| WARNER BROS.-1ST NAT'L | Lil Dagover Winnie Lightner Fairbanks-Blondell | Michael Curtiz Lloyd Bacon Alfred E. Green | Joe Barry T. C. Wright Al Alborn | Ernest Haller Dev. Jennings Sol Polito | "The Captain's Wife" "Manhattan Parade" "Union Depot" | Thew-Mandel- stamm Lord-Branch Nicholson-De Leon |

In the Art Director's Field

With this issue we introduce a section devoted to the Art Directors. In this section will be found news notes and technical articles of interest to anyone connected with the making of motion pictures. From time to time we will introduce the men who design and create the settings that mean so much to the success of the pictures. In this issue we present William Darling of the Fox Studios.—Editor's Note.

William Darling



TO BE A successful Art Director, one must be a combination of artist, architect and mechanical draughtsman.

Apparently, William Darling, art director of the Fox Film Corporation, must possess these qualities, for his work for Fox stamps him as one of the motion picture industry's finest art directors. Mr. Darling has devoted his life to the acquiring of his knowledge, and is a prof and student; declaring that only by constant study and research can an art director hope to create settings that will be artistic, virile and absolutely correct in detail and style.

William Darling is a name this man acquired after he came to America. He was born in the little town of Sandorhaz, Hungary, and was baptized as Vilmos Bela Sandorhazi. But when he came to America he felt that that was almost too much for the ordinary man to pronounce, so had his name legally changed to William Darling, so that his associates might tag him with the name, "Bill", if they so desired.

He was an artist by instinct from childhood. He inherited his ability, for his father and mother were both painters in their leisure time. They encouraged their son and sent him to the University of Architecture at Budapest. His ability as a painter won him a scholarship at the Hungarian Academy of Fine Arts. Then followed years of roaming the highways and byways of the world, studying people, customs, architecture—

life. Unknowingly, he was fitting himself for his present position, for the knowledge he gained in those years has been invaluable in designing sets with foreign locale.

During the World War he served his country—and that experience stamped itself indelibly on his mind and when he re-created the blasted countryside for "What Price Glory?" he was calling upon his own experience and first-hand knowledge.

It was shortly after the Armistice was signed that he came to America. He had made one previous visit here. He earned his living by painting portraits of notables along the Atlantic seaboard. But, California was calling him, and he eventually went to Santa Barbara where he became interested in the work of the American Film Company. He joined their art staff, draughting sets and designing scenic backgrounds. His work at once attracted attention in the film industry, and when Fox Films decided to make the screen production of "Monte Cristo", Darling was sent for. That colorful production was his introduction to Hollywood, and he has been under contract to Fox ever since.

During his years with Fox Films he has created hundreds of sets, ranging from modern peasant dwellings to medieval castles, from desert strongholds of the Foreign Legion to the latest thing in night clubs. And realism prevails in his work. So realistic are his settings that many foreign "extras" have been known to fairly haunt his sets where they find the atmosphere of the homeland.

Darling has a certain daring in his work, best exemplified by his sets for "Mother Knows Best". He decided to dress one of those sets in the then new modernistic furnishings. It was the first time in motion pictures that a set had been given such treatment. The result was sensational. Darling was right. He had figured such treatment would be in harmony with the action and would assist in the dramatization. Harmony and symmetry, says Mr. Darling, are keynotes in motion picture production.

"There is no art requiring so many heterogeneous elements as the motion picture," says Mr. Darling. "Take for example, the writers, actors, costumers, cinematographers, and the directors—they are all responsible for the ultimate success of the production. They must all work in harmony or the results will not be right. If the cameraman does not light a set properly the objective of the art director will be lost. If the costumer does not provide the proper colors and details an entire sequence will be made ridiculous—for can you picture a foreign set, perfect in detail, with the characters dressed improperly?"

"As in motion picture photography, the cameraman must know the atmosphere of the story so he can properly light it, so must the art director know and feel the atmosphere so he may create the scenic backgrounds to bring out this atmosphere. Art direction is something more than a mechanical carrying out of certain detail. An art director must be a creator. He must be a dreamer, but still practical, so that he can place in the studio those dreams that we call sets."

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The Amateur Professional

(Continued from Page 41)

the film developed in contrast developer, the result being a circular shaded area as shown in Figure 4. It is necessary to

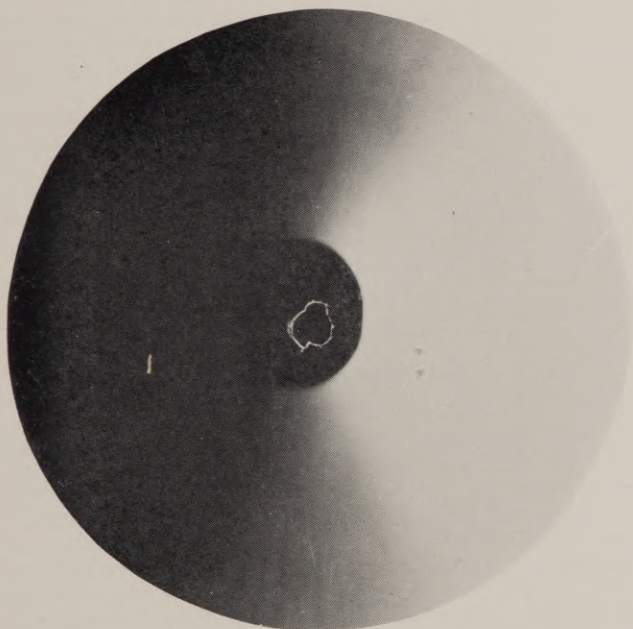


Fig. 4

use a source of D.C. to illuminate the lamp; otherwise a stroboscopic effect is produced which betrays itself by a series of radial spokes on the developed film.



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Greenbrier Hotel Installs 16 mm. Projection Room for Amateurs

ADDITION another link in the chain of ever increasing popularity of amateur movies, the famous Greenbrier Hotel at White Sulphur Springs, W. Va., has equipped and opened a 16 mm. theatre for the exclusive use of its guests and their children.

During the spring and autumn seasons, hundreds of the socially elite come to this noted health resort, the greater majority bringing with them their movie cameras to record in a permanent living picture, the manifold joys of the numerous sports and other attractions the resort has to offer. Golf, horseback riding, swimming, mountain hikes and archery are just a few of the subjects the notables train the lenses of their cameras on, to say nothing of the truly marvellous scenery which literally devours thousands of feet of film. But—the majority of these movie makers usually spend weeks, sometimes months at a time at the hotel and heretofore have been unable to see the result of their efforts until they return home—now, with the innovation of the 16 mm. guest theatre, the hotel management has hit on an idea which is a boon to those guests with a movie penchant.

Recognizing the ever increasing popularity of amateur movies and realizing the need for a miniature theatre for the convenience of his guests, Mr. L. R. Johnston, general manager of the Greenbrier, himself a keen amateur, converted a centrally located space in the hotel into a complete and up-to-the-minute projection theatre. Fifty feet long and sixteen feet wide, with a seating capacity of sixty persons, the theatre is the last word in comfort with its hanging draperies of red velour and comfortable arm chairs. Here the guest may take his films and his friends and with the help of an experienced operator, see what his results are.

Tobis Cuts Prices

THE FRENCH Tobis company announces new prices on sound equipment. In future production apparatus will cost \$3,830 instead of \$7,255 while projectors for small theatres will be sold at \$2,925.

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The Hollywood Camera Exchange

WHILE cries of depression are heard from all corners of the country, there is one spot in Hollywood where the word has no place. It is at the Hollywood Camera Exchange. Cliff Thomas, President, and C. G. McKie, Treasurer, wear boom-time smiles, and say there is no such word as depression in their lexicon.

This Hollywood Camera Exchange has shown remarkable growth in the brief time since it was organized. Art Reeves and Thomas started it. And after it had developed into one of the busiest spots in Hollywood Reeves sold part of his interest and started the Hollywood Motion Picture Equipment Company, dealing in sound and laboratory apparatus. When Reeves left, C. G. McKie came in as one of the officers. Mr. McKie, formerly with the Roy Davidge Film Laboratories, has had much experience in the photographic supply business. For years he was with F. J. Falman Company in El Paso, Texas, as business manager.

In addition to the tremendous camera rental business, and the selling of all kinds of supplies for the professional, the Hollywood Camera Exchange has gone deeply into the Amateur field. Everything for the Amateur is on hand, and both Mr. Thomas and Mr. McKie cordially invite all amateurs to call when they visit Hollywood. At the Hollywood Camera Exchange the amateur cinematographer has the opportunity of meeting the professional and exchanging ideas or obtaining advice. "We want the amateurs to make this their headquarters", says Mr. Thomas, "We are always ready to give them the benefit of our professional experience."

Amateur Movie Making

(Continued from Page 34)

majority. Furthermore, no picture—no matter what its genre—can be called a finished production unless the idea motivating its maker—in other words, its story—is completely realized. This realization naturally includes something of story construction, direction, editing, and titling as well as merely cinematography. Therefore, the would-be entrant to this competition will do well to assure himself that he has an understanding of the basic principles of all of these phases of production and that his film bears this out—before deciding that his film is complete. In order to aid in this respect, this department will for the next few months devote itself exclusively to one of these subjects each month. In the meantime, let me suggest that both the 1930 and the 1931 editions of the **Cinematographic Annual** will prove invaluable reference works to those intending to produce films for the competition. You may not be able to follow in detail the methods outlined by the various outstanding professional technicians in their articles in these books, but you cannot but be aided in your efforts by absorbing the ideas they set forth.

Star Chasing A Business

YOU HAVE probably heard of "star-chasers," but we doubt whether you ever knew before that there is a man in Hollywood who makes a living from this mad pursuit. This person is Ralph Staub, who produces "Screen Snapshots" for Columbia, and he gets most of his intimate scenes in the lives of the stars by following them around with a movie camera and catching many of them off guard.

Ralph has been busy these days at Malibu, trying to catch the notables at play along the beach, but they often elude him and swim out to sea to escape the camera. Ralph is hoping that some day one of them will get a cramp while he has his camera, so that he can record a real rescue that wasn't written in the script.

Another Free Victor Film Directory

THE 4TH Revised Edition of the Victor Directory of Film Sources is announced by Victor Animatograph Corporation as being ready for distribution.

Publication of this edition has been somewhat delayed because of the rapid development in the Sound field and the desire of the Victor Animatograph Corporation to have the Sound listings as complete and as authentic as possible before incorporating them as a regular part of the directory.

The 4th Edition is even more replete with valuable information for the 16 mm. equipment user than the previous three issues.

Included in the additions to the editorial contents of the directory are: "What kinds of Films do the Churches Want?", "What Educators have learned about Educational Motion Pictures", "Average Purchase Prices and Rental Rates on all Types of 16 mm. Films", "Sound Recording—Methods and Costs", "What About 16 mm. Sound," and much other useful information.

The Victor Directory has so adequately filled a long felt need among equipment owners that the demand for it has become tremendous. The listings are surprisingly complete and comprehensive. A large percentage of recipients retain it for constant reference, and this is particularly true in the school and church fields.

The Directory lists over 250 sources of free loan subjects, and virtually all known production, sales and rental sources.

The Victor Animatograph Corporation, manufacturers of the well known line of Victor 16 mm. Motion Picture Equipments, has won many new friends and has been highly praised because of the unselfish spirit of service which actuated the compilation, publication and free distribution of the Film Source Directory.

A copy of the 4th Revised Edition may be obtained by addressing the Directory Editor, Victor Animatograph Corporation, Davenport, Iowa.

Roach Installs Double Director Shorts Units

FOLLOWING the resignation of Warren Doane as general manager of Hal Roach studios, recently, Benjamin W. Shipman was appointed to fill the berth. He will also retain his position as legal advisor and business manager.

L. A. French becomes assistant gen. manager and retains his position as purchasing official.

A system of alternating direction goes in at Roach, starting on the next cycle of pictures. Under this scheme, two directors will be assigned to each unit, to work alternately, with one preparing while the other is shooting.

Warren Doane and James Horne will be the alternating directors on the Charles Chase unit; Robert McCowan and Ray McCarey on the "Our Gang" pictures; Gil Pratt and R. C. Currier, former cutter, on the Pitts-Todd series with Morrie Lightfoot co-directing with each, and George Stevens and Anthony Mack will share direction on the "Boy Friends" group.

This means that Roach will be entirely without a scenario department, W. M. Walker, present head, carrying out his job without a staff. Some of the writers directing for the first time are on trial, according to the studio.

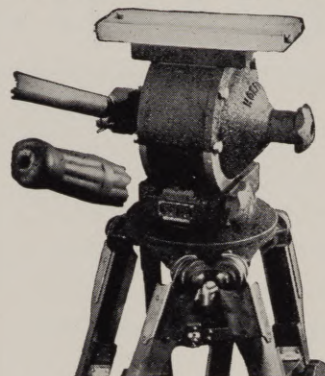
B.T.-H. Plans to Enter 16 Millimeter Field

B.T.-H., one of the leading electrical firms of the world, which has installed 600 talkie sets in the British Isles, is preparing to make 16 mm. talking pictures. The company will not produce itself, but will concentrate at present on reproducing existing pictures on the narrow film. It has designed and is using a machine for reducing 35 mm. films to 16 mm. It weighs about 60 pounds and will be sold well under \$1,000, the price to vary with the demand.

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Lucien Le Saint Dead

LUCIEN LE SAINT, pioneer of the French film trade, is dead at 50. He was responsible for some of the earliest discoveries in regard to the motion picture camera. For the past three years he had been blind.

50 Bauer Sound Sets for Belgium

FIFTY Bauer sound reproducing sets were installed in Belgian theatres during the summer. This is believed to be a record for a single make of sound apparatus in Belgium. It is a German sound-on-film set.

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New Model Animatophone

THE ANIMATOPHONE 16mm Talking Projector, which several months ago caused such a sensation with its Vertical Turntable and other unique embodiments, has been made even more attractive, compact and efficient through the acquisition of a "blimp" type case which encloses the projector while it is in operation.

Another major improvement is a vertical tone-arm which operates on the pendulum principle.

It is an interesting fact that the very first units of the "Blimp" Animatophone to be manufactured were initially demonstrated before officers of the U. S. Navy Recruiting Service, with the result that 36 complete units are now in use in Navy Recruiting Stations thruout the country.

The design of the "blimp" case is such that the turntable is attached from the outside to the shaft which protrudes thru an opening in the side.

Access to the projector for threading, focusing and adjusting speeds is gained by opening the right hand side of the case, which is hinged at the bottom.

During operation the case is closed and the picture is projected thru a slot in the front. Thus, the sound of the projector motor and film movement are rendered practically inaudible.

The new Animatophone is much more compact, has smaller case dimensions, and several pounds have been removed from its weight.

The vertical tone-arm is a radically new idea, and is completely characteristic of A. F. Victor inventions. It is extremely simple in principle and construction, yet it accomplishes its purpose in a highly gratifying manner.

This is believed to be the only pickup in use which reproduces sound on the same principle that is employed in the original recording of the record.

Inasmuch as the needle retains relatively the same position in the grooves, laterally and vertically, from the very beginning to the end of the record, it eliminates entirely the distortion which is so common to other types of pickups when the needle is in the extreme outer or inner grooves of the record.

The tone-arm proper is pivoted from the top of a rocker-arm. As the needle is advanced by the record groove, the tilting of the rocker-arm compensates for the lateral movement of the pickup head and keeps the needle on a straight line across the record. The pendulum principle employed in the pickup keeps the needle constantly at right angles to the line of travel.

It is said that this feature offers a tremendous advantage, in that the needle is kept always parallel to the record groove and rides perfectly in the original recording track. The claim is that this results in a more natural and perfect reproduction, and, at the same time, is decidedly less damaging to the record groove.

A push-pull Pilot Light to aid in properly setting the needle on the record is among the several other new features on the "Blimp" Animatophone.

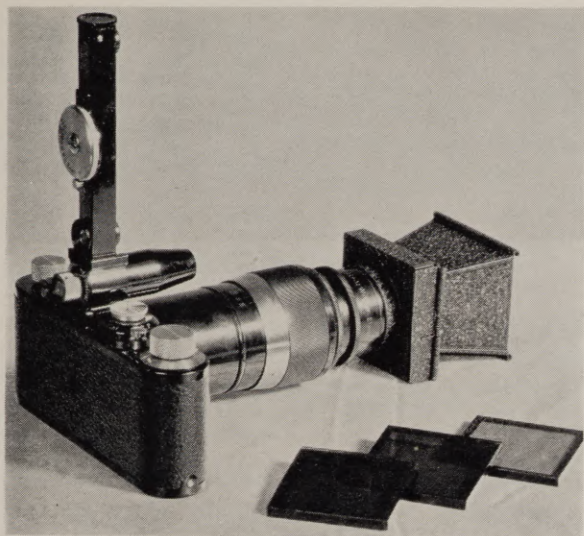


Woolf Out of Multicolor

J. C. WOOLF, who, up to September 30, was sales manager for Multicolor, Ltd., has been made vice-president and general manager of the Los Angeles Wild Animals Farm, Inc., located on the grounds formerly used by the Hollywood Polo Club, on Ventura Boulevard.

The entire Selig Zoo has been purchased and moved to the new quarters, and will form the nucleus of the animal project.

It is the purpose of the farm to breed, raise or buy every type of wild animal that can be reared in captivity, so that there will be available every sort of animal necessary for the use of picture producers.



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100 16mm. Educational Films Made Available for School Use

AN EVEN HUNDRED highly endorsed 16 mm. educational films have just been added to the Bell & Howell film library, marking a notable advance in the number of worthwhile motion pictures available for school use.

These films represent most comprehensive collaborative work on the part of a large staff of expert cameramen, travelers, explorers, scientists, and educators; and more than three million feet of negative has been drawn upon in assembling the subject material.

Forty-two of the subjects relate to science and nature, and six are listed under what is called the American Statesmen Series, each film of this series being devoted to an outstanding national character such as Washington, Franklin, Jefferson, and Lincoln. Thirteen subjects have to do with as many literary notables or their works, and in this group are films on Poe, Holmes, Irving, and other famous writers.

Nine films are given over to geographical subjects and seven to industry and agriculture. Among the other films are eight on outdoor life and a five-reel picture on the Life of Christ.

Dr. Raymond L. Ditmars; Edward J. Foyles, M.S., Henry R. Linville, Arthur H. Graves, Ida M. Mellen, and others prominent in educational or research circles, have either cooperated in the preparation of the films or have expressed marked approval of them.

An idea of the interest value and picture excellence of the films is obtainable from the fact that a number of them have been appearing in new sound versions as a part of the regular program of the famous Roxy Theatre in New York.

All of the hundred subjects are now available in 16 mm. silent versions in film lengths of approximately 400 feet per reel. Synchronized sound discs are being prepared on a majority of the subjects to permit of sound presentation, and some of these discs are already completed.

Acquire Hudson Lab.

ACCQUISITION of the Hudson Film Industries laboratory at Palisades, N. J., is announced by International 16 mm. Pictures, Inc. Capacity of the plant, now figured at 1,500,000 feet per week, will be increased to 4,000,000 feet per week. Only 16 mm. film will be handled at this lab. Negotiations are also under way for a second laboratory at which both 36 and 16 mm. film will be treated.

Doug to South America

DOUGLAS FAIRBANKS plans an airplane trip in December to South America in company with Victor Fleming, director, and Charles Lewis, actor. They will take cameras and sound equipment for the making of a picture on their journey, which is expected to take them down to Chile, across to the Atlantic coast and then up to the headwaters of the Amazon.

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Filmo Topics

AGAIN we find much of interest to the amateur in the November issue of Filmo Topics, Bell & Howell's splendid monthly publication which they furnish free to anyone who will write them requesting same. Partial list of contents follows:

LIGHT! CAMERA—Try your hand at home movie making IN your home, for now that film is faster indoor shots are easier to take than ever before.

Filmo News Pictorial.

An article about taking travel films in Old Mexico.

Movie Maker's Christmas Cards.

Titling your films—Title making tricks.

Seasonable hints.

Fox Profit Drop

NET profit of Fox Film and affiliated companies for the first six months of this year declined to \$120,152.68, compared with \$6,785,897 in the corresponding period last year. The drop was largely due to a reduction in theatre receipts and film rentals, which amounted to \$45,749,867 against \$50,937,848 in the first half of 1930.

Proper Application of Make-Up

(Continued from Page 30)

| | Women | | Men | |
|---------------------------------|--------|-------|--------|-------|
| | Blonde | Brun. | Blonde | Brun. |
| Panchromatic Grease Paint | 24 | 24 | 26 | 26 |
| Panchromatic Face Powder | 24 | 25 | 26 | 27 |
| Panchromatic Lining Color | 21 | 22 | 22 | 22 |
| Panchromatic Masque | Brown | Brown | Brown | Brown |
| Panchromatic Dermatograph | | | | |
| Pencil | Brown | Brown | Brown | Brown |
| Panchromatic Moist Rouge | 8 | 9 | 7 | 7 |

| | Elderly Types | | Children | |
|-----------------------------------|---------------|-------|----------|-------|
| | Women | Men | Female | Male |
| Panchromatic Grease PaintNo. | 23 | 25 | 22 | 24 |
| Panchromatic Face Powder | 23 | 26 | 22 | 24 |
| Panchromatic Lining Rouge | 21 | 21 | 21 | 21 |
| Panchromatic Moist Rouge | 8 | 7 | 8 | 7 |
| Panchromatic Masque | Brown | Brown | Brown | Brown |
| Panchromatic Dermatograph | | | | |

Pencil

(For extreme types the number may vary to suit the conditions)

Individual Panchromatic Make-up items are known by numbers as follows:

Panchromatic Grease Paint—Nos. 21, 22, 23, 24, 25, 26, 27, 28, 29.

Panchromatic Powder—Nos. 21, 22, 23, 24, 25, 26, 27, 28, 29.

Panchromatic Lining—Nos. 21, 22.

Panchromatic Lip Rouge—Nos. 7, 8, 9.

Panchromatic Dermatograph Pencil—Brown.

The lowest numbers represent the light shades, and as the numbers become higher the shades are correspondingly darker.

Dry Rouge is eliminated in make-up for black and white motion picture photography.

However, dry rouge comes into use in make-up for Technicolor. Dry rouge should be applied over the powder. A camel hair powder brush is ideal for this purpose. Apply the high points of the cheek bone first, then blend towards the nose and other points of the cheek, watching the contour of the face. Be sure the edges are well blended and that no demarcation is noticeable around the eyes and mouth. For male types use rouge sparingly.

The following color chart for Technicolor make-up should be of value.

| | Female Type | Male Type |
|---------------------------|-------------|-----------|
| Grease Paint | D | D |
| Face Powder | 24 | 24 |
| Lining Color | 21 | 21 |
| Moist Rouge | Light | Dark |
| Under Rouge | Light | Dark |
| Dermatograph Pencil | Brown | Brown |
| Dry Rouge | Light | Dark |
| Masque | Brown | Brown |
| Liquid Make-up | D | D |

Profit Seen for Warners In the Current Quarter

WARNER BROS. started its current fiscal year on Sept. 1 with indications that it has emerged from the period of deficit operations and the current quarter, ending Nov. 30, is expected to net a profit, says the "Wall St. Journal." Steady improvement in earning power has been shown since July, the financial paper states, and the company's financial position is understood to be sound, with no bank loans.

Blacklisting English Exhibs

THE KINEMATOGRAH Renter's Society, London, on the advice of the joint investigation committee of that distributors' organization and the Cinematograph Exhibitors Ass'n, will stop renting pictures to those exhibitors who have not lived up to agreements on sharing terms. Five exhibitors have been banned. The ruling is now in effect and the banned exhibitors will be forced out of business, it is stated.

Gaumont-British Theaters Show Increased Profit

GENERAL THEATERS Corporation and Denman Pictures Houses' third annual report shows a net profit for the year of \$1,679,295. Gaumont-British holds the whole of the ordinary shares in General Theaters and most of the Denman Picture Houses' capital.

A Cinematographer In Sweden

(Continued from Page 13)

Swedish films—particularly talkies—is limited, they have a surprisingly modern plant. They still use the old-style glass stages, and, unlike most of our producers, instead of spending a great deal of money for sound-proofing them, they have merely surrounded their sets with heavy monk's-cloth drapes, which deaden the unwanted reverberation quite satisfactorily. Their technical equipment is largely German: Tobis-Klangfilm recording, Askania cameras, and a variety of German lighting units. When we visited them, they had not yet adopted the microphone boom, but were still planting the "mike" in the set, behind props. They had, however, just completed the installation of an excellent machine-development laboratory, and this, together with a recent change to the use of American film, has resulted in very excellent photographic quality in their productions. Although our own work gave us little time for theatre-going—we worked or travelled sixteen to eighteen hours per day—we did manage to see several Swedish pictures. They were technically and dramatically excellent—unusually so when one remembers the very limited production possible. It was particularly interesting to us to note that since the Swedish Film Industry is largely controlled by the government, many of the films contain a good deal of both direct and indirect propaganda directed against the activities of the Communist and Fascist parties, and praising the existing regime.

From the American Cameraman's viewpoint, another fortunate thing is that all educated Swedes speak English; the Swedish educational system is excellent, and all pupils are rigidly required to master both English and German before they can wear the picturesque, white "student's cap" which signifies that they have graduated from highschool—or, more correctly, passed the "Studentexamen," which somewhat corresponds with our College Board Examinations. There is, however, a difference, for to fail in this examination is considered a lasting disgrace, for without the prized student-cap there can be no future for any except the laboring class. These white-capped students, however, are a godsend to the traveler, for one can always be sure that the wearer of such a cap will not only understand English, but be more than glad to assist you.

As a cameraman, moreover, I found everyone eager to be of aid, for the Swedes are proud of their country, and everyone, rich or poor, great or humble, is willing to go far out of his way to assist in making pictures that will tell the world more about Sweden. Therefore, it is a pleasure to make pictures in Sweden: for what more can a cameraman want than a beautiful country, quaint customs and unusual places to photograph, and a friendly, hospitable people to work with?

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WANTED—Bell & Howell or Akeley Camera at once. Send full description and best price to L. Russell. 514 Dickinson Street S. E., Grand Rapids, Michigan.

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FOR SALE—DeVry, just made two Universal Newsreel pictures, and 6 x 13 cm. Gaumont f 4.5 stereo, best offer. Want Eyemo, or Akeley lenses. Eddie, care A. Cinematographer.

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Tappenbeck, Hatto—Fox.
Tolhurst, Louis H.—M-G-M.

Van Buren, Ned—Eastman
Kodak Co., Hollywood.
Van Trees, James—
Varges, Ariel—Fox Hearst
Corp., Tokyo, Japan.

Wagner, Sidney C.—Fox.
Walker, Joseph—Columbia.
Walker, Vernon L.—R-K-O.
Warrenton, Gilbert—Universal.
Wenstrom, Harold—
Westerberg, Fred
Whitman, Phil H.—
Wilky, L. Guy—
Wrigley, Dewey—Pathe.
Wyckoff, Alvin—Multicolor.

Zucker, Frank C.—Warner
Bros., New York.

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